Annals of Hepatology 29 (2024) 101187

Contents lists available at ScienceDirect

Annals of Hepatology

journal homepage: www.elsevier.es/annalsofhepatology

Abstracts of the 2023 Annual Meeting of the ALEH (Asociación Latinoamericana para el Estudio del Hígado)

P-1 EFFECTIVENESS AND SAFETY OF BARIATRIC SURGERY IN PATIENTS WITH ADVANCED HEPATIC FIBROSIS SECONDARY TO METABOLIC ASSOCIATED FATTY LIVER DISEASE IN A TERTIARY REFERENCE HOSPITAL

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Introduction and Objectives: There is limited knowledge regarding the outcomes of patients with Metabolic Associated Fatty Liver Disease (MAFLD) and hepatic fibrosis who undergo bariatric surgery. We aimed to evaluate the benefits and safety of bariatric surgery in patients with MAFLD and advanced hepatic fibrosis (F3-F4).

Patients and Methods: An observational and prospective study that included participants from the MAFLD outpatient clinic of a Brazilian tertiary hospital, who had grade 3 or 4 hepatic fibrosis on biopsy or transient hepatic elastography and underwent bariatric surgery for obesity treatment.

Results: A total of 25 patients were included, with 80% being female. The mean age was 54 years and the surgical procedures performed included gastric bypass (44%) and sleeve gastrectomy (56%). The body mass index ranged from 35 kg/m^2 to 63 kg/m^2, with a median of 41 kg/m^2. Regarding comorbidity, 68% had hypertension, 80% had type 2 diabetes or insulin resistance, and 48% had dyslipidemia. Furthermore, 64% were diagnosed with grade 3 fibrosis and 36% already had cirrhosis, with 4 of them presenting portal hypertension with esophageal varices, but Child-Pugh A. After the procedure, weight loss ranged from 18% to 47% with a median follow-up of 3 years, with higher percentages achieved with gastric bypass (Table 1). Regarding hepatic fibrosis, 50% showed regression to less advanced stages. Among patients with portal Hypertension, 2 of them had subsequent endoscopic examinations without detection of esophagogastric varices. There were no complications related to hepatic decompensation; however one patient developed postoperative pulmonary thromboembolism without severity.

Conclusions: Bariatric surgery, either gastric bypass or sleeve gastrectomy, resulted in significant weight loss in patients with advanced hepatic fibrosis and regression of fibrosis, without serious outcomes or hepatic decompensation in a small cohort in a tertiary reference hospital.

TABLE 1
WEIGHT LOSS BY TYPE OF SURGICAL PROCEDURE PERFORMED

Weight Loss	Gastric bypass	Sleeve gastrectomy
<30%	5	11
>30%	6	3
Total	11	14

https://doi.org/10.1016/j.aohep.2023.101188

P-2 NASH IS IMPROVED THROUGH MODIFICATIONS IN H3K9 METHYLATION BY PIRFENIDONE ACTING AS JMJD2B DEMETHYLASE ANTAGONIST.

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Introduction and Objectives: NASH is characterized by hepatic lipid accumulation and inflammation and Jmjd2b up-regulation has been linked with this illness progression. Pirfenidone is an antifibrotic agent with anti-inflammatory and antioxidant effects recognized to decrease NASH features. Here, we report epigenetics mechanisms related to PFD-induced histone modifications involved in experimental NASH. This study aimed to investigate PFD as an epigenetic regulator in the Jmjd2b pathway by demethylating H3k9me3 in a NASH animal model.

Material and Methods: Male C57BL/6J mice were fed with either normo-diet, or high fat/carbohydrate-containing diet (HF) for 16 weeks. A HF-subgroup was treated with PFD 300 mg/kg/d from week

8th to the end of protocol. Weight was recorded on weekly basis. Insulin tolerance test was performed at the end of treatment. Dual channel microarrays were hybridized to the Mus musculus genome version with 22,000 genes using hepatic mRNAs. Liver and fat histological analyses were carried out, and liver proteins were analyzed by western blot and Chromatin immunoprecipitation (ChIP). Molecular docking was used to validate binding of PFD to JMJD2BBBBB.

Results: Compared with HF group, mice treated with PFD reduced weight gain, hepatic fat accumulation, and epididymal fat. In addition, treatment drastically decreased cholesterol, triglycerides and VLDL, ALT and AST. Inflammatory nodules, fibrosis, and steatosis in liver tissue were also reduced. Besides, PFD modified expression of genes, such as, Jmjd2b, Pparg, Fasn and Srebp1. Likewise, PFD restored the repressive marks in H3k9, suggesting its capacity as an epigenetic regulator by decreasing Jmjd2b protein activity and interacting with its catalytic site (JmjC).

Conclusions: PFD played an important role as an epigenetic regulator modifying Jmjd2b activity and improving NASH features.

https://doi.org/10.1016/j.aohep.2023.101189

P-3 PIRFENIDONE PREVENTS OBESITY-ASSOCIATED NONALCOHOLIC STEATOHEPATITIS AND CARDIAC FIBROSIS THROUGH HORMONAL REPROGRAMMING

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Introduction and Objectives: Obesity is now a worldwide epidemic, associated with insulin resistance, nonalcoholic steatohepatitis (NASH), and cardiovascular diseases (CVDs), being the latter main cause of global death. NASH is common among Hispanics, characterized by fatty infiltration, inflammation, with or without hepatic fibrosis, and shows hormonal dysregulation. Pirfenidone (PFD) is an anti-inflammatory, and anti-fibrotic drug. Previously, we reported that PFD has anti-steatosis effects on hepatic and cardiac tissues in mice with NASH, but its mechanisms involved are not completely known. The aim of this study was to investigate the effects of PFD on hormonal regulation in high-fat/high-carbohydrate (HFHC)- diet-induced obese male C57BL/6J mice.

Materials and Methods: At the age of 19-20 weeks, mice were fed with normal diet (ND, 6.2% lipids, 44.2 carbohydrates, 18.6% proteins, n=7) and normal water. Other mice were fed with HFHC (60.3% lipids, 21.4% carbohydrates, 18.3% proteins, n=14) and water with carbohydrates (2.31% fructose and 1.89% sucrose) diet for 16 weeks; at 8 weeks of feeding, seven mice with HFHC diet were administered PFD (300 mg/kg/day) by gavage. Experiments were performed according to the ARRIVE guidelines. Insulin tolerance test (4 h of fasting), ELISA, Hematoxylin-Eosin and Masson staining, and morphometric analysis were performed. Data analysis were evaluated using one-way ANOVA with Tukey post hoc test.

Results: HFHC mice showed NASH with an increase in resistin and aspartate aminotransferase (P0.05). Parameters significantly elevated in HFHC were prevented by PFD such as weight (body, liver, and heart), tibia length, epididymal fat, hepatic steatosis, insulin resistance, hormones (insulin, glucagon, leptin, plasminogen activator inhibitor 1) (Table), triglycerides, total cholesterol, LDL, and VLDL, including inflammatory foci and fibrosis in hepatic and cardiac tissue (P0.05). PFD decreased alanine aminotransferase (P0.05).

Conclusions: PFD decreases metabolic hormones and could be a promising drug for the prevention of obesity-induced NASH and CVDs.

Male C57BL/6J			
Hormones (pg/mL)	ND	HFHC	HFHC+PFD
Adiponectin	11,094.2 ± 718.8	9,308.3 ± 1603.7*	12,752.6 ± 335.5
Glucagon	2,368.1 ± 592.7	5,184.4 ± 584.8*	1,601.3 ± 624##
GIP	135.5 ± 14.3	193.2 ± 54.6	135.3 ± 15.5##
GLP-1	136.9 ± 13.1	207.4 ± 18.8	179.2 ± 48.6
Insulin	5,753.9 ± 449.1	18,029.7 ± 2,749.3***	9,191.9 ± 968.7##
Leptin	1,470 ± 192.5	14,678.8 ± 2,094***	4,475.7 ± 846.4###
Resistin	55,051.6 ± 4,168.4	89,032.2 ± 10,975.5*	85,795.1 ± 5,184.5
PAI-1	715.3 ± 111.3	2,424 ± 301.8***	1,058.4 ± 152.9##
Ghrelin	18,293.9 ± 2,347.1	20,636.8 ± 3120.7	16,557.8 ± 2,428.6

Table. Serum hormones levels. Data are expressed as mean ± SEM. *P < 0.05, ***P < 0.001 vs. ND; ##P < 0.01, ###P < 0.001 vs. HFHC. Abbreviations: GIP, Glucose-dependent insulinotropic peptide; GLP-1, Glucagon-like peptide-1; PAI-1, Plasminogen activator inhibitor-1.

https://doi.org/10.1016/j.aohep.2023.101190

P-4 HETEROGENEITY OF PRE-LIVER TRANSPLANT EVALUATION PRACTICES IN LATIN AMERICA COUNTRIES: THE LIVER TRANSPLANT ALEH SPECIAL INTEREST GROUP, INTERNATIONAL SURVEY 2023

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Introduction and Objectives: Latin America (LA) includes 20 countries, with significant cultural and economic diversity. In order to develop regional liver transplant (LT) guidelines, the LT ALEH special interest group (SIG) made a survey aimed at investigating the current status of pre- LT evaluation in LA.

Materials and Methods: A 150 questions-survey was distributed to LT-SIG members in 01-05/2023. A descriptive analysis was performed.

Results: 20 answers from 14 countries were obtained. All countries performed LT except one. Financing was private in 5%, public in 32% and mixed in 63%. Allocation system was MELD-Na/MELD in 70 and 30%, respectively. Hepatocellular carcinoma granted supplementary points except in one country. Expansion of Milan criteria was acceptable in 9 centers (UCSF, Up to 7, AFP model, Milan/Brazil). Effective downstaging applied to LT except in 2 centers and AFP>1.000 was a contraindication in 10 centers. Three centers performed LT for cholangiocarcinoma and 4 for colorectal liver metastasis. Acute Liver failure had emergency prioritization in all but 2 countries. Age>65 was a contraindication in 1, >70 in 2 and >75 in 4 centers. Body Mass Index>40 was a contraindication in 8, and <18 in 2 centers. Fragility score7 was a contraindication in 1 center. A period of alcohol abstinence was required by 14 centers (3-6 months), as well as for tobacco in 4, cannabis in 7 and cocaine in 14. VIH was a contraindication in 7 centers and portal thrombosis in 3. Other contraindications were: coronary artery disease requiring surgery (8 centers), dynamic intraventricular gradient>80 mmHg (8 centers), hepatopulmonary syndrome with severe hypoxemia (14 centers), severe or moderate portopulmonary hypertension (7 and 10 centers, respectively).

Conclusions: Pre-LT evaluation in LA is very heterogeneous. The collaborative sharing of experiences between countries and the development of regional guidelines will be relevant in order to unify criteria and improve LT access.

https://doi.org/10.1016/j.aohep.2023.101191

P-5 APACHE STUDY DESIGN TO EVALUATE THE EFFICACY AND SAFETY OF PLASMA EXCHANGE WITH HUMAN SERUM ALBUMIN 5% ON SHORT-TERM SURVIVAL IN PATIENTS WITH ACUTE-ON-CHRONIC LIVER FAILURE AT HIGH RISK OF HOSPITAL MORTALITY.

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Introduction and Objectives: Acute-on-chronic liver failure (ACLF) in cirrhotic patients is characterized by acute deterioration of liver function and severe organ injury with high short-term mortality. Liver transplantation is the only treatment to improve survival. A pilot study suggested that plasma exchange with human serum albumin 5% (PEA5%) as a replacement fluid is feasible and safe in ACLF patients and may improve organ function and survival. This study aimed to assess PE-A5% as a treatment for patients with ACLF in a pivotal study.

Materials and Methods: A phase 3, multicenter, randomized (1:1), controlled, parallel-group, open-label study (APACHE) compares standard medical treatment (SMT) + PE-A5% (treatment arm) to SMT alone (control arm). PE-A5% is performed using Albutein 5% (Grifols). Treatment schedule consists of two initial PE-A5% sessions on consecutive days followed by every other day PE-A5% (min-max 4-9 PE-A5%). Patients receive IVIG (200mg/kg) after every 2 PE-A5% to prevent hypogammaglobulinemia-associated infections, and FFP after each PE-A5% to prevent coagulopathy. Eligible patients are adult (18-79 years old), with ACLF-1b, ACLF-2, or ACLF-3a at admission or during hospitalization. Main exclusion criteria are patients with ACLF-1a or ACLF-3b, ACLF >10 days

before randomization, septic shock requiring norepinephrine (>0.3μg/kg/min) or a second vasopressor, active infection, and severe respiratory failure.

Results: Target enrollment is 380 ACLF patients at high risk of hospital mortality. The primary efficacy endpoint is the 90-day overall survival. Secondary efficacy endpoints include 90-day transplant-free survival and 28-day overall survival. Main exploratory endpoints include overall and transplant-free survival at days 28 and 90, in-patient hospital and ICU stay, incidence of organ failures and ACLF course. Safety analyses include adverse events, vital signs, physical assessments, and laboratory tests.

Conclusions: APACHE will provide pivotal results on the efficacy and safety of PE-A5% as a treatment to improve survival in ACLF (NCT03702920;EudraCT:2016-001787-10).

https://doi.org/10.1016/j.aohep.2023.101192

P-6 PREVALENCE AND CLINICAL CHARACTERISTICS OF LEAN NON-ALCOHOLIC FATTY LIVER DISEASE IN MÉXICO

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Introduction and Objectives: Non-alcoholic fatty liver disease (NAFLD) is one of the main etiologies of chronic liver disease and is mainly observed in people with obesity and type 2 diabetes mellitus; however it is estimated that 7%-20% of individuals with NAFLD have lean body habitus (BMI <25 kg/m2). In México, the prevalence of NAFLD ranges from 41.3% to 47%; however, there is no data on lean NAFLD. This study aimed to estimate the prevalence of lean NAFLD in México and determine the clinical and demographic characteristics of the studied population.

Materials and Methods: A cross-sectional study to estimate the prevalence of NAFLD in the adult population was carried out in 5 states in México. History of metabolic and cardiovascular diseases, alcohol and tobacco consumption were collected; in addition, weight and height were measured. Lean NAFLD was defined as the presence of hepatic steatosis (grade 1 or higher) and a BMI <25 kg/m2. To identify clinical and demographic characteristics associated with lean-NAFLD, the proportion of lean-NAFLD among subjects with NAFLD was compared between groups defined by each characteristic using a Pearson chi-square test.

Results: 3554 patients were included, the mean age was 47 years (±12), and 60% were women. NAFLD was found in 52% of the participants, from which 5.5% (n=195) corresponded to lean NAFLD. 7.2% of patients with lean NAFLD had T2DM compared to 12% of patients with Non-lean NAFLD. Hypertension, 11% of patients with lean NAFLD presented it compared to 18% of patients with Non-lean NAFLD. Table 1 shows the characteristics of the study population.

Conclusions: The prevalence of LEAN NAFLD was 5.5%. We found that 1 of every 10 individuals with NAFLD corresponds to lean-NAFLD and that this relation is lower in those with hypertension and dyslipidemia but not in those with diabetes.

Table 1. Clinical characteristics of patients without NAFLD, lean NAFLD, and non-lean NAFLD.

Characteristics	No NAFLD (n=1696)	Lean NAFLD (n=195)	Non-lean NAFLD (n=1663)	P value*
Age (years), mean (SD)	45 (13)	48 (14)	48 (11)	<0.001
Female, n (%)	1099 (65)	107 (55)	938 (56)	<0.001
BMI (kg/m^2), mean (SD)	25.9 (3.9)	23.2 (1.8)	31.7 (4.8)	<0.001
Diabetes, n(%)	112 (6.6)	14 (7.2)	192 (12)	<0.001
Hypertension, n (%)	166 (9.8)	22 (11)	304 (18)	<0.001
CVD, n (%)	40 (2.4)	7 (3.6)	52 (3.1)	0.3
Obesity, n (%)	210 (12)	0 (0)	954 (57)	<0.001
Dyslipidemia, n (%)	342 (20)	43 (22)	542 (33)	<0.001
Mild alcohol consumption, n (%)	762 (45)	92 (48)	686 (41)	0.036
Smoking n (%)	359 (21)	43 (22)	341 (21)	0.8
MAFLD, n(%)	0 (0)	21 (11)	1663 (100)	<0.001
Steatosis, n (%)				
None (G0)	1696 (100)	0 (0)	0 (0)	
Mild (G1)	0 (0)	156 (80)	1065 (64)	
Moderate (G2)	0 (0)	37 (19)	531 (32)	
Severe (G3)	0 (0)	2 (1)	67 (4)	

SD, standard deviation; BMI, body mass index; CVD, cardiovascular disease; MAFLD, fatty liver disease associated with metabolic dysfunction. *Pearson´s Chi-squared test

https://doi.org/10.1016/j.aohep.2023.101193

P- 7 RISK FACTORS FOR NON-ALCOHOLIC FATTY LIVER DISEASE AFTER LIVER TRANSPLANTATION

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Introduction and Objectives: Non-alcoholic fatty liver disease (NAFLD) is considered the liver manifestation of metabolic syndrome (MS) and is a common complication after liver transplantation (LT). This study aimed to assess the frequency of NAFLD and new onset diabetes after LT (NODALT), as well as associated risk factors.

Materials and Methods: 142 LT patients aged 18 years or older were included. We collected clinical, anthropometric, and laboratory data and performed hepatic ultrasound and elastography using 2D shear-wave technique.

Results: Of the participants, 62.7% were male (mean age 60±21 years). Alcoholic cirrhosis was the primary cause of LT in 27% of cases. The mean change in weight after LT was +8.9 kg. Liver steatosis was

identified in 37 participants (26.1%). The proportion of obese or overweight individuals (73% vs. 56%), diabetes mellitus (65% vs. 38%), dyslipidemia (65% vs. 50%), and MS (65% vs. 39%) was higher in the group with hepatic steatosis compared to those without. In multivariate analysis, hypertriglyceridemia (OR=2.80, 95%CI 1.22-6.43, p=0.015) and NODALT (OR=2.65, 95%CI 1.15-6.10, p=0.022) were identified as risk factors for NAFLD. NODALT occurred in 44 individuals (31%) and was associated with time from LT (OR=1.009, 95%CI 1.003-1.015, p=0.004), current body mass index (OR=1.105, 95%CI 1.014-1.204, p=0.022), and fatty liver (OR=2.832, 95%CI 1.082-7.415, p=0.034). Prevalence of advanced chronic liver disease, according to elastography, was 11%. The concordance between non-invasive scores and 2D-SWE was very low, with only 38% for FIB4 and 31% for NFS when elastography indicated advanced fibrosis and 25% and 20% for FIB4 and NFS, respectively, when elastography indicated the absence of advanced fibrosis.

Conclusions: NAFLD, liver fibrosis and NODALT are common after LT. There is a need for improved non-invasive methods to accurately identify advanced fibrosis in LT patients.

https://doi.org/10.1016/j.aohep.2023.101194

P-8 OSTEOSARCOPENIA AND FIBROSIS SEVERITY IN NON-ALCOHOLIC FATTY LIVER DISEASE

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Introduction and Objectives: Both osteosarcopenia and non-alcoholic fatty liver disease (NAFLD) are subject to complex and interconnected pathophysiological processes. This study aimed to assess the osteosarcopenia frequency in NAFLD and its association with liver fibrosis.

Materials and Methods: Adults with established risk factors for the development of NAFLD were selected. Assessment of NAFLD and degrees of fibrosis was performed by ultrasound (US-FLI) and ultrasound elastography. Quantitative assessment of muscle mass and bone mass density (BMD) were measured with dual energy X-ray absorptiometry (DXA). Low BMD was defined as established by WHO. Appendicular lean mass (ALM), representing the sum of lean mass at upper and lower limbs; appendicular lean mass index (ALMI: ALM/height2). Sarcopenia if ALMI <7.0 kg/m2 men or <5.5 kg/m2 women.

Results: 73 participants were enrolled, and hepatic steatosis was present in 58. All data are presented as median (IQR) or n (%). Age 63 (53-67) years, women 59(80.8%), 25(OH)D3 levels 26(22-31) ng/mL. The frequency of liver fibrosis (F 2), low levels of vitamin D (<20 ng/mL) and sarcopenia was, respectively: 16(22%), 14 (19%), 6(8%). We found low BMD in 43 (59%), of these 6(14%) osteoporosis, 35(81.4%) osteopenia and 2(4.6%) low BMD for age. The groups with and without fibrosis did not show differences in the levels or frequency of vitamin D deficiency or sarcopenia. However, participants with fibrosis had lower T-score and lower BMD in the lumbar spine and hip when compared to participants without fibrosis, p<0.05.

Conclusions: Our data suggest that the frequency of low BMD is higher in the population with NAFLD and high incidence of liver fibrosis than in the general Brazilian population. Evaluating by DXA, we observed that patients with liver fibrosis have lower bone mass, but not less muscle mass compared to patients without fibrosis.

https://doi.org/10.1016/j.aohep.2023.101195

P-9 AUTOIMMUNE LIVER DISEASES IN LATIN AMERICA: A WEB-BASED SURVEY

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Introduction and Objectives: Autoimmune liver diseases (AILD), including autoimmune hepatitis (AIH), primary biliary cholangitis (PBC), and primary sclerosing cholangitis (PSC), are chronic immune-mediated liver conditions. This study aimed to assess the reality of AILD in Latin America (LA).

Materials and Methods: A web-based survey consisting of 35 questions on AILD was distributed to hepatologists affiliated with ALEH through social media.

Results: A total of 65 hepatologists participated in the survey. The most treated AILD in the region was AIH. Widely available antibodies for diagnosis included anti-mitochondrial (100%), anti-smooth muscle (98.5%), and anti-nuclear antibodies (95.4%), while access to anti-gp210/sp100 antibodies was limited (<55%). Although 97% had access to liver biopsy, only 72.3% were assisted by liver pathologists. Elastography and endoscopic retrograde cholangiopancreatography were available for 90.8% and 98.5%, respectively. Ursodeoxycholic acid (UDCA) was the primary medication for PBC (100%), followed by fibrates (bezafibrate: 56.3%, fenofibrate: 71.9%). There was considerable heterogeneity in selecting the criteria to evaluate PBC response to UDCA, with 39.3% favoring Paris II criteria. Cholestyramine/antihistamines were commonly recommended for treating pruritus, while fibrates were used by only 47.7%. For PSC, 86.2% of hepatologists indicated the use of UDCA. Azathioprine was the main immunosuppressor employed for AIH treatment, although indications for treatment were controversial. Most physicians treated patients with signs of active disease, regardless of liver enzyme and IgG levels. Prednisone alone was the primary treatment recommended for AIH patients with decompensated cirrhosis (70.7%). Remission in AIH was mostly defined by normalization of liver enzymes and IgG with minimal/absent inflammation on histology (47.7%), with only 60% of respondents performing liver biopsies to assess histological remission. While 62.5% of the participants attempted to withdraw AIH treatment, 78% refrained from discontinuing treatment in the presence of anti-SLA.

Conclusions: This survey provides valuable insights into the current management of AILD in LA, highlighting areas of heterogeneity that warrant further investigation.

https://doi.org/10.1016/j.aohep.2023.101196

P-10 THE EFFECTS OF CHILEAN RESPONSE TO COVID-19 ON ALCOHOL CONSUMERS: A NATURAL POLICY EXPERIMENT

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Introduction and Objectives: Alcohol consumption is a leading public health challenge in Chile. The country's response to COVID-19 was an exceptional simulation of the WHO's SAFER initiative to reduce alcohol-related harm. We hypothesize that policies to control COVID-19 affected alcohol consumption in Chile. This study aimed to analyze the Chilean prevalence of alcohol consumption during the COVID-19 pandemic.

Materials and Methods: We reviewed two cross-sectional surveys with non-probabilistic samples from the Chilean National Service for the Prevention and Rehabilitation of Drug and Alcohol Consumption (SENDA) conducted on adults in June 2020 (15,280 responses) and April to June 2021 (22,121 responses). A description of alcohol consumption status was performed, stratifying by sex, age, and educational level. We performed binary logistic regressions to explore associations between demographics and alcohol consumption.

Results: Almost 40% of respondents decreased their alcohol consumption, while 20% increased it. Youth and lower educational levels were associated with reduced consumption, while older age was associated with increased intake. The main reason for the reduction was fewer consumption opportunities. Among those who increased consumption, mental health was attributed as the main cause Web-based sales emerged as an alternative access to alcoholic beverages.

Conclusions: The restriction on access to alcoholic beverages seems to be a successful strategy to dissuade alcohol consumption among young people. However, web-based sales, home delivery, and mental health conditions might undermine these effects.

https://doi.org/10.1016/j.aohep.2023.101197

P-11 PRIMARY BILIARY CHOLANGITIS AND PRIMARY SCLEROSING CHOLANGITIS HEPATIC OVERLAP SYNDROME – CASE REVIEW

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Introduction and Objectives: The overlap between primary biliary cholangitis (PBC) and primary sclerosing cholangitis (PSC) is a very rare association infrequently described in the literature, with only a few cases reported as of 2023. There are no case reports published in Latin America. Its diagnosis is based on 2 of the following 3 criteria: biochemical cholestasis, presence of AMA (anti-antimitochondrial antibodies) or anti-gp210 or anti-sp100 antibodies, and a liver biopsy compatible with PBC, associated with imaging consistent with intrahepatic focal bile duct strictures or compatible biopsy with PSC. Diagnosing this association could be important for the follow-up of these patients since they may present relevant complications to screen or present an inadequate response to treatment. This study aimed to describe patients with PBC and PSC overlap syndrome in a Latin American hospital.

Materials and Methods: Perform an observational, retrospective and descriptive study. The clinical records of patients with PBC and PSC treated at the Hospital Clínico Universidad de Chile between 2021 and 2023 were reviewed. Laboratory information, imaging, and indicated treatment were analyzed.

Results: During the study period, 8 patients with PBC-PEC overlap syndrome were identified; all patients were female, with cholestatic alterations in their liver profile, positive AMA/M2-3E type antibodies, and with focal stenosis on magnetic resonance cholangiography, compatible with PSC (except in one case, which was classified as small duct PSC on her liver biopsy). All received therapy with ursodeoxycholic acid in doses between 13 and 15 mg/kg, with good response (Table).

Conclusion: The overlap between PBC and PSC is rare; it is probably underdiagnosed and perhaps patients with PBC should be studied more often with magnetic resonance cholangiography. The overlap is not associated with worse response to ursodeoxycholic acid.

Age/gender	Laboratory data			MRCP	Biopsy	Treatment / Favorable response (yes/no)
	AP/GGT (U/L)	IgM (mg/dL)	AMA			
58/F	604/970	654	(+) 1/320 Anti-M2 (+)	Compatible with PSC	No	UDCA 15 mg/kg / Yes
60/F	754/442	767	(+) 1/80	Compatible with PSC	No	UDCA 13 mg/kg / Yes
78/F	150/100	73	(+) 1/160 M2/3E (+)	Compatible with PSC	Compatible with PBC	AUDC 15 mg/kg / Yes
69/F	1001/622	241	AMA-M2 (+)	Normal	Compatible with small duct PSC	UDCA 13 mg/kg / Yes
49/F	443/ (-)	620	AMA-M2 (+), M2-3E (+)	Compatible with PSC	No	UDCA 15 mg/kg / Yes
57/F	664/591	(-)	AMA-M2 (+)	Compatible with PSC	No	UDCA 15 mg/kg / Yes
56/F	240/307	458	AMA-M2 (+), M23E (+)	Compatible with PSC	No	UDCA 13 mg/kg / Yes
68/F	316/71	434	(+) 1/640	Compatible with PSC	Compatible with PBC in 2006	UDCA 15 mg/kg / Yes

F: Female, PBC: primary biliary cholangitis, AP: alkaline phosphatase, GGT: gamma-glutamyl transferase, IgM: immunoglobulin M, AMA: antimitochondrial antibody, PSC: primary sclerosing cholangitis.
Normal values of AP: Less than 120 U/L; GGT: Less than 50 U/L.

https://doi.org/10.1016/j.aohep.2023.101198

P-12 MELD 3.0 IS THE BEST PREDICTOR OF MORTALITY IN PATIENTS WITH ACUTE-ON-CHRONIC LIVER FAILURE (ACLF)

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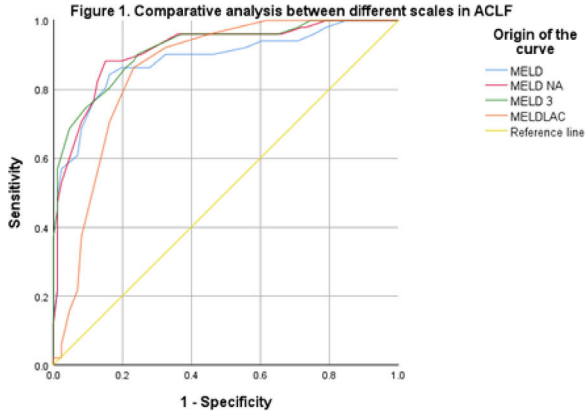
Introduction and Objectives: ACLF is a syndrome characterized by multiorgan failure due to acute decompensation in chronic liver disease, with high short-term mortality. Therefore, scales have been designed to predict prognosis and early mortality. This study aimed to evaluate MELD, MELD NA, MELD LACTATE, and MELD 3.0 scales for survival prediction in ACLF patients.

Materials and Methods: Observational, retrospective, and analytical study. The scales were calculated, and sensitivity (S) and specificity (E) were determined using CLIF-C-ACLF as a reference ROC curves. Cut-off points were established considering the value closest to the maximum S and 0.8 E. Cumulative mortality percentage was analyzed using Kaplan-Meier curves, and comparison of ACLF grades was performed with the significant Long-Rank test with p-value <0.005.

Results: 233 patients were included, 165 (71%) males, with a mean age of 52 years ± 12.96. The etiology was alcohol-related in 158 (68%) cases. ACLF grade distribution, it was 1: 37%, 2: 41%, and 3: 22%. The MELD 3.0 showed the highest discriminatory power for ACLF grade 3, with AUC of 0.91 (95% CI:0.86-0.96), a cut-off point of 34.5, sensitivity of 86%, and specificity of 80% (Figure 1). The 2- year mortality rate was 123 (52%); 30 (35%), 51 (53%), and 42 (82%) for grades 1, 2, and 3, respectively, with a significant Log-Rank test, chi-

square = 34.99, p <0.001. The mean survival by grades was 17 months for grade 1, 13 months for grade 2, and 5 months for grade 3.

Conclusions: MELD 3.0 scale showed better performance as a tool to evaluate severity and predict short-term mortality risk in ACLF patients.



https://doi.org/10.1016/j.aohep.2023.101199

P-13 IMPACT OF SPONTANEOUS BACTERIAL PERITONITIS ON THE OUTCOME OF PATIENTS WITH HEPATIC CIRRHOSIS

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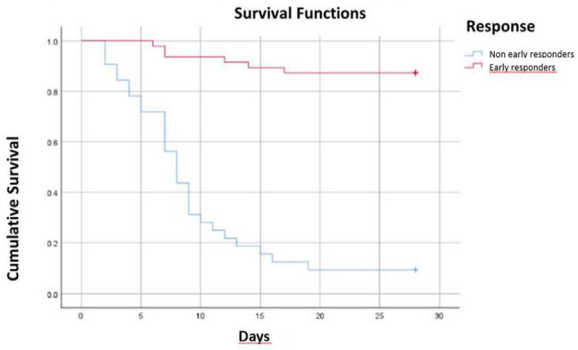
Introduction and Objectives: Spontaneous bacterial peritonitis (SBP) increases mortality, making it relevant to evaluate factors that negatively impact the outcome of patients who develop SBP. This study aimed to evaluate SBP as a risk factor in the outcome of patients with cirrhosis.

Materials and Methods: A retrospective and analytical study was conducted on patients with cirrhosis who developed SBP. The cause of cirrhosis, Child-Pugh score, Model for End-Stage Liver Disease (MELD) score, and MELD-Na score were evaluated. They were classified into early responders (ER) (more than 25% decrease in polymorphonuclear cells on the second day of effective antibiotic treatment), development of renal injury (RI), acute-on-chronic liver failure (ACLF), and 28-day mortality. Statistical analysis included evaluating the mortality rate using the Kaplan-Meier curve, log-rank test, considering significance at p 0.05. RI, ACLF, and non-early responders were independently compared.

Results: A total of 79 patients were included, 40 males (50.63%). The most common etiology was alcohol-related in 39 cases (49.36%), and Child-Pugh class C was observed in 67 cases (84.81%). Cephalosporins were used in 66 cases (83.54%), and carbapenems in 13 cases (16.45%). There were 6 deaths among early responders and 29 deaths among non-early responders, with a mean survival of 25.76 days for early responders versus 9.78 days for non-early responders, p < 0.001 (fig1). There were 2 deaths without ACLF and 33 deaths with ACLF, with a mean survival of 26.93 days without ACLF versus 14.6 days with ACLF, p < 0.001. There were 3 deaths without renal injury and 32 deaths with RI, with a mean survival of 25.65 days without RI versus 16.17 days with RI, p < 0.001.

Conclusions: SBP is associated with a high mortality rate. However, treatment response, the presence of ACLF, and RI have a significant impact on patient survival.

Figure 1. Area Under Receiver. Operating Characteristics Curve (AUROC) of for early responders and non-early responders for predicting 28-day survival.



https://doi.org/10.1016/j.aohep.2023.101200

P-14 SPONTANEOUS BACTERIAL PERITONITIS IN CIRRHOTIC PATIENTS: PREVALENCE AND ANTIBIOTIC RESISTANCE PATTERNS

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Introduction and Objectives: Spontaneous bacterial peritonitis (SBP) is a leading cause of mortality in cirrhotic patients, and antibiotic resistance poses a significant challenge. This study aimed to assess the prevalence of SBP and the microbial patterns found in peritoneal fluid among hospitalized patients with cirrhosis.

Materials and Methods: All patients with decompensated cirrhosis, aged 18 years or older, who underwent propaedeutic paracentesis between 01/01/2017 and 13/09/2021 at a Brazilian university hospital, were included in the study.

Results: A total of 366 individuals were enrolled [(65.6% male; median age 61 (53-68) years]. The primary causes of cirrhosis were ethanolic (43.7%) and viral hepatitis (24.8%). SBP was diagnosed in 118 patients (18.6%). Only 16.1% of all patients received antibiotic prophylaxis, with norfloxacin being the preferred choice for 78% of them. Among the 34 peritoneal fluid samples with bacterial growth, 58 microorganisms were isolated. These included 50% classified as multi-sensitive (MS), 40% as multidrug-resistant (MDR), and 10% as extensively drug-resistant (XDR) bacteria. Gram-negative bacteria accounted for 62% of the isolates, while gram-positive bacteria made up 38%. The most frequently identified microorganisms were Escherichia coli for gram-negatives and the Staphylococcus ssp. for gram-positives. Meropenem demonstrated the highest overall sensitivity (79%), followed by piperacillin/tazobactam (67%). Conversely, ceftriaxone (48%) and ciprofloxacin (41%) exhibited the highest rates of resistance. Antibiotic prophylaxis did not influence resistance rates and no XDR bacteria were isolated from patients exposed to norfloxacin.

Conclusions: Our findings indicate that half of the SBP patients present with MDR or XDR bacteria. Empirical therapies such as meropenem and piperacillin/tazobactam show the greatest effectiveness. Additionally, antibiotic prophylaxis was not associated with an increase in antimicrobial resistance.

https://doi.org/10.1016/j.aohep.2023.101201

P-15 HELICOBACTER PYLORI AS A RISK FACTOR FOR THE DEVELOPMENT OF MANIFEST ENCEPHALOPATHY AND OTHER COMPLICATIONS IN PATIENTS WITH LIVER CIRRHOSIS AT THE EUGENIO ESPEJO HOSPITAL IN THE PERIOD MAY 2019-JUNE 2022

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Introduction and Objectives: It has been suggested that Helicobacter pylori contributes to hyperammonemia in cirrhosis and, with it, to Hepatic Encephalopathy, and the eradication of the bacteria decreases the concentration of ammonia in blood in these patients. Helicobacter pylori may be involved in persistent neurological impairment by promoting the release of involved pro-inflammatory and vasoactive substances, and it may also enter the brain through the oral-nasal-olfactory pathway or through infected circulating monocytes due to defective autophagy by disrupting the blood-brain barrier; producing reactive oxygen metabolites and even influencing the apoptotic process leading to neurodegeneration. This study aimed to describe Helicobacter pylori as a risk factor for the development of manifest encephalopathy and other complications in patients with liver cirrhosis.

Materials and Methods: Case-control study in patients treated at the Eugenio Espejo Hospital, with a diagnosis of liver cirrhosis in the period May 2019- June 2022. The case group consisted of cirrhotic patients with hepatic encephalopathy and the control group of cirrhotic patients without hepatic encephalopathy. The sample was 82 cases and 163 controls. Inferential statistics were applied, using chi-square for the relationship between categorical variables, statistical significance p less than 0.05.

Results: Hepatic encephalopathy occurs more frequently in the female sex with 51.5%, mainly in those over 50 years of age, with primary education, being the most frequent the alcoholic etiology. According to our study, it was determined that patients infected with Helicobacter pylori have a 4.4 fold increase in the possibility of developing manifest hepatic encephalopathy, more than uninfected patients. In addition, Helicobacter pylori infection was related to the presence of hepatocellular carcinoma as a complication, increasing the probability of having it by 2.6 times.

Conclusions: Helicobacter Pylori infection is a risk factor for the development of Hepatic Encephalopathy and is associated with various complications, mainly non-variceal upper gastrointestinal bleeding and hepatocellular carcinoma.

https://doi.org/10.1016/j.aohep.2023.101202

P- 16 HEPATOCELLULAR CARCINOMA IN CENTRAL AMERICA: A MULTIDISCIPLINARY APPROACH IN A COSTA RICAN COHORT

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is a major problem in Latin America, but international guidelines do not consider the sociocultural heterogeneity and economic disparities in the region. We review the multidisciplinary approach and results from the largest cohort to date reporting on HCC in Central America.

Materials and Methods: Retrospective analysis of a cohort of HCC diagnosed radiographically or histologically and analysis of the multidisciplinary approach.

Results: from 10/2018 to 03/2023, 186 cirrhotic patients with HCC were evaluated. Distribution according to BCLC staging system was: 3, 46, 17, 22, and 12% for stage 0 to D, respectively. As initial treatment, most patients received transarterial therapy (TA) (n=79, 43%) followed by ablation (n=29, 16%), systemic treatment (ST) (n=11, 6%), surgical resection (n=9, 5%) and liver transplantation (LT) without bridging therapy (n=3, 2%). Based on current EASL guidelines, 49% of patients received a BCLC-recommended treatment strategy and 51% had a stage migration strategy based on multidisciplinary decisions: 0: 33% TA, A: 59% TA, B: 31% ST, C: 61% palliative and 17% TA. Main reasons for migration strategy were the location of the lesion (0/A to TA), risk factors for decompensation after TA (B to ST) and limited access to ST. Using selected criteria (<65 years, San Francisco criteria and no apparent contraindications), 21% (n=39) were candidates for LT: 38% (n=15) progressed or died outside the LT list (LTL), 10% (n=4) were managed with another treatment and remain off LTL, 26% receive LT (n=10) and 3% (n=1) drop out or die on LTL. Main reason for LT rate among candidates is low availability of donors and waiting time on list (mean rate 2018-2022: 5.72DD/pmp/y, mean waiting time: 236 days).

Conclusions: factors such as availability of resources and local experience frequently lead to multidisciplinary approaches adapted to health system and divergent from the established guidelines.

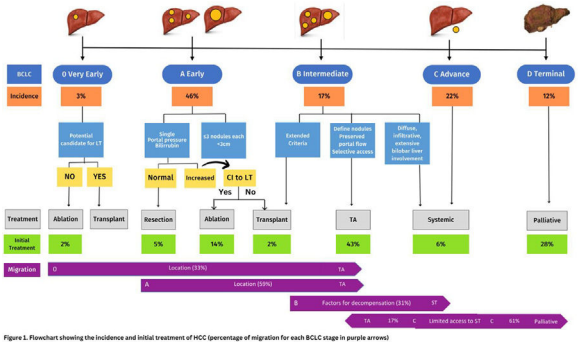

Figure 1. Flowchart showing the incidence and initial treatment of HCC (percentage of migration for each BCLC stage in purple arrows)

https://doi.org/10.1016/j.aohep.2023.101203

P- 17 LIVER TESTS ABNORMALITIES AS PROGNOSTIC MARKERS OF DEATH IN PATIENTS HOSPITALISED BY COVID-19. A COHORT STUDY

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Introduction and Objectives: In COVID-19, liver alterations has multiple mechanisms. The objective of this study is to evaluate if raise in transaminases and bilirubin predicts death in COVID-19.

Materials and Methods: Retrospective cohort study of adults hospitalized with COVID-19 and hypoxemia. The primary outcome was death of any cause with a multivariate independent model for ALT, AST and total bilirubin adjusted by age, diabetes mellitus, presence of fever, lymphocyte count, D dimer and lactate dehydrogenase.

Results: Data from 702 patients was collected. The mortality rate was 38%. In admission, 64% of patients had elevated ALT, 64% elevated AST and 8.3% elevated total bilirubin. AST rise level was independently associated with death (OR=1.06, 95% CI: 1.02-1.11 by every rise of 40 U/L, p-value=0.009). Total bilirubin also was independently associated with death (OR = 1.26, 95% CI: 1.08-1.47 for every rise in 1 mg/dl, p-value=0.003). Total bilirubin was also associated with ICU admission, mechanical ventilation and length of hospital stay. Results for ALT did not allow us to conclude an independent association with death. Age, fever and lymphocyte count nadir also was associated with death.

Conclusions: In patients with COVID-19 and hypoxemia, a rise in transaminases and bilirubin is frequent. AST and bilirubin predict mortality, so it is reasonable to measure them in admission. Progress must be made in including these markers in predictive models of mortality and clinical decision rules.

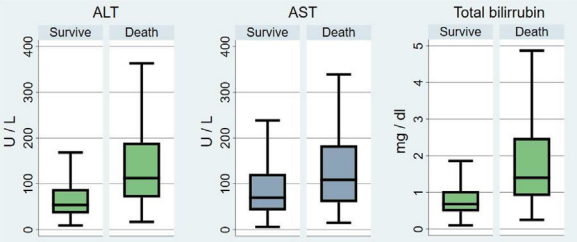

Figure. Box plot of ALT, AST and total bilirubin in patients with COVID-19 who survived or death.

https://doi.org/10.1016/j.aohep.2023.101204

P- 18 ANASTROZOLE MAY NOT BE ASSOCIATED FATTY LIVER DISEASE AND HEPATIC FIBROSIS IN WOMEN WITH BREAST CANCER

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Introduction and Objectives: Nonalcoholic fatty liver disease (NAFLD) is highly prevalent among women undergoing androgen inhibitors therapy for breast cancer. As breast cancer survival increases, understanding the long-term impact of anastrozole therapy on NAFLD becomes crucial. This study aimed to assess the prevalence and severity of NAFLD in relation to anastrozole adjuvant therapy among breast cancer patients and to investigate the risk factors associated with the occurrence and progression of NAFLD.

Materials and Methods: Cross-sectional study, recruiting women with breast cancer from an oncology outpatient clinic. Participants underwent abdominal ultrasound to detect liver steatosis and transient elastography for hepatic fibrosis evaluation. Two groups were formed: those not receiving hormone therapy and those exposed to anastrozole.

Results: 91 patients (mean age 58±12 years) were included (71 in the no hormone therapy group and 20 in the anastrozole-exposed group). Follow-up period ranged from 1-315 months [median 25, interquartile range (IQR) 70]. Prevalent comorbidities were diabetes mellitus (27.5%), arterial hypertension (52.7%), dyslipidemia (26.4%), and obesity (47.7%). Exposure to anastrozole ranged from 1 to 60 months (mean 23 ± 15.8). Liver steatosis was detected in 50.5% of the patients, with no significant difference between groups (p = 0.652). Median liver stiffness was also similar (5.2kPa, IQR 2.2, p = 0.102), with 6.7% of patients showing liver stiffness 8kPa (p = 0.613) and 4.5% with measurements 12kPa (p = 0.217). Variables associated with fatty liver were diabetes mellitus (p = 0.018), arterial hypertension (p = 0.047), dyslipidemia (p = 0.021), body mass index (BMI) (p = 0.001), and follow- up time (p = 0.002). Liver stiffness 8kPa was associated with BMI (p = 0.033).

Conclusions: Half of breast cancer patients present NAFLD, with approximately 7% presenting advanced fibrosis. Anastrozole therapy was not associated with NAFLD. Shared metabolic risk factors may play a role in NAFLD in women with breast cancer.

https://doi.org/10.1016/j.aohep.2023.101205

P-19 CHARACTERIZATION, PROGNOSTIC FACTORS, AND SURVIVAL IN MODERATE ALCOHOL-ASSOCIATED HEPATITIS: A MULTICENTER STUDY

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Gustavo A Romero[23], Florencia D Pollarsky[23], Juan Carlos Restrepo[24], Luis G Toro[25], Pamela Yaquich[26], Manuel Mendizabal[27], Maria Laura Garrido[28], Sebastian Marciano[29], Melisa Dirchwolf[30], Victor Vargas[31], Cesar Jimenez[31], Guadalupe García-Tsao[32], Guillermo Ortiz[32], Juan G Abraldes[33], Patrick Kamath[4], Vijay Shah[4], Ramon Bataller[34], Juan Pablo Arab[35]

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Introduction and Objectives: Alcohol-associated hepatitis (AH) corresponds to a severe entity with high short-term mortality; however, few studies have been published in patients with moderate AH. This study aimed to characterize patients with moderate AH in a global study, identifying prognostic factors and survival at 30, 90, and 180 days.

Materials and Methods: Multi-center retrospective cohort study, which included patients with moderate AH (2009-2019). Moderate AH was defined as MELD 20 at presentation. We used competing-risk models with liver transplantation as a competing risk to assess variables associated with mortality.

Results: We included 564 patients (24 centers, 12 countries). Median age was 48±11.6 years, 29.2% female, and 46.2.5% Caucasian. 51.7% had cirrhosis, and 1.4% underwent liver transplantation. The MELD score on admission was 17 [6-20]. In the entire cohort, 37.7% used corticosteroids. Survival rates at 30, 90, and 180 days were 93.7% (0.911−0.955), 89.1% (0.860−0.916), and 87% (0.836−0.898), respectively. The most frequent causes of death were multiple organ failure (30.4%) and infections (11.5%). In the univariate analysis, variables associated with mortality were age (sHR 1.035, 95%CI:1.020−1.049; p <0.001), Maddrey's discriminant function (sHR 1.013, 95%CI:1.007 −1.020; p<0.001), albumin at admission (sHR 0.837, 95%CI:0.682 −1.026; p 0.087), INR (sHR 1.534; 95%CI: 1.070−2.198, p=0.020), renal replacement therapy (RRT) (sHR 7.066; 95%CI:4.381−11.392; p<0.001) and infections during hospitalization (sHR 2.079; 95%CI:1.308−3.306; p=0.002)(Table). However, in the multivariate-adjusted model, only age (sHR 1.042; 95%CI:1.019−1.0656, p<0.001), RRT (sHR 7.796; 95%CI:3.993−15.218, p<0.001) and infections during hospitalization (sHR 1.666; 95%CI:0.999−2.779; p=0.050) were associated with mortality. Of note, corticosteroids did not demonstrate benefit.

Conclusions: Patients with moderate AH have a significant mortality at short-term. Infections are associated with higher mortality

and are the most important cause of death in these patients. Better models are necessary to predict mortality in moderate AH adequately.

Table.- Univariate and multivariate competing risk analyses. Mortality is the primary event, and liver transplant is the competing risk.

	Univariate analysis			Multivariate analysis		
Variables	sHR	95% CI	p-value	sHR	95% CI	p-value
Age (years)	1.035	1.020–1.049	< 0.001	1.042	1.019–1.0656	< 0.001
Sex (Female)	0.918	0.658–1.280	0.616	1.237	0.734–2.084	0.423
MELD	1.00	0.955–1.054	0.885	-	-	-
MELD-Na	1.00	0.997–1.006	0.316	-	-	-
MELD 3.0	1.025	0.988–1.064	0.177	-	-	-
mDF	1.013	1.007–1.020	< 0.001	1.013	0.993–1.033	0.179
Cirrhosis	1.037	0.682–1.577	0.863	-	-	-
Corticosteroids use	1.036	0.730–1.469	0.842	-	-	-
Albumin at admission	0.837	0.682–1.026	0.087	-	-	-
Bilirubin at admission	1.013	0.989–1.038	0.267	-	-	-
Serum creatinine	0.992	0.488–2.015	0.983	-	-	-
INR	1.534	1.070–2.198	0.020	-	-	-
Renal replacement therapy	7.066	4.381–11.392	< 0.001	7.796	3.993–15.218	< 0.001
Infections during hospitalization	2.079	1.308–3.306	0.002	1.666	0.999–2.779	0.050

sHR: Subdistribution Hazard ratio; mDF: Maddrey's discriminant function; INR: International Normalized Ratio.

https://doi.org/10.1016/j.aohep.2023.101206

P-20 OXIDATIVE STRESS MARKERS IN ALCOHOLIC LIVER DISEASE

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Introduction and Objectives: Several mechanisms participate in the physiopathology of Alcoholic Liver Disease (ALD), such as deregulation in the immune system and oxidative stress. Aim: To analyze markers of lipoperoxidation and oxidative proteins in patients with ALD: Alcohol hepatitis (AH) and liver cirrhosis (CiR).

Materials and methods: This transversal study included 220 individuals divided into three groups: the control group (n=100), individuals with alcohol consumption 10 g/day and AUDIT score 7, the group of AH patients (n=45) and CiR patients (n=75). We measured the serum levels of MDA (thiobarbituric acid method) and carbonylated proteins (DNPH reaction). The statistical analysis was performed by the SPSS v25 software. Data expressed as mean values ± SEM, p-value <0.05 was considered statistically significant.

Results: The control group (CT), with 30.47±0.52 years old, alcohol consumption of 2.32±0.21 gOH/day and AUDIT 2.24±0.10. The ALD patients, had 41.68±6.3 years old, consumption of 354.25± 139.54 gOH/day and AUDIT 30±5.45. The AST, ALT, GGT, total and indirect bilirubin serum were higher in AH and CiR compared to CT (p<0.001), ratio of AST/ALT 2. The albumin levels were lower (p<0.001) in AH vs. CT. The carbonylated proteins serum concentrations were higher in patients with AH compared to CT and CiR (p<0.001). Differences in MDA serum levels were found between CiR versus HA and CT groups (p< 0.005).

Conclusions: Our results suggest that carbonylated proteins and MDA are markers of oxidative damage in the alcohol hepatitis and liver cirrhosis Mexican patients. This damage may increase the risk of malnutrition, susceptibility to infections and sepsis, deficient coagulation factors production, gastrointestinal bleeding, among other complications that increase mortality. According these results is necessary to counteract oxidative damage for improving and complementing the actual treatment of alcoholic liver disease.

https://doi.org/10.1016/j.aohep.2023.101207

P-21 FIBROSIS DEVELOPMENT AND MALIGNANCIES ARE DELAYED BY PIRFENIDONE WHILE INCREASING SIRT1 NUCLEAR TRANSLOCATION AND HISTONE 3 DEACETYLATIONS IN A HEPATOCARCINOMA MODEL

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most common liver neoplasm worldwide. Pro-inflammatory and pro-fibrogenic processes are fundamental in tumor development. On the other hand, Pirfenidone (PFD) has anti-inflammatory and antifibrogenic properties useful to counteract hepatocarcinogenesis; however, effects of this drug on SIRT1, and epigenetic regulations in this type of damage are unknown. The aimed of this study is to evaluate PDF effects on SIRT1 translocation, and deacetylation of histone H3 lysines 9 and 14 (H3K9 and H3K14) in a HCC model.

Materials and Methods: Male Fischer-344 rats (n=18) were divided into three groups: CTL: control group, HCC: damage group, rats weekly administrated with diethylnitrosamine (DEN,50mg/kg/i.p.) and 2-aminofluorene (2AAF, 25mg/kg/p.o.) for 16 weeks. HCC/PFD group of rats administrated with DEN and 2AAF plus PFD (300mg/kg/day/p.o.). Tumor development and fibrosis markers were analyzed histologically. In addition, expression of SIRT1 deacetylase, p300 acetylase, H3 and H3K9 and H3K14 acetylated were analyzed by western blot.

Results: Normal liver architecture is disturbed by dysplastic nodules formation surrounded by extracellular matrix and fibrosis, also an increase in cells with anaplasia and steatotic foci was observed in liver tissues of HCC group. PFD was effective in preventing these changes. Immunohistochemistry revealed an overexpression of GPC3 and -SMA in damage group, which correlates with malignant degeneration; these responses were also prevented by PFD. Finally, western blots evidenced an overexpression of SIRT1 in nuclear fraction of PFD group, triggering H3K9 and H3K14 deacetylation, in addition, a decrease in p300 acetylase expression in nuclear fractions was noted. Noteworthy, c-Myc was decreased.

Conclusions: PFD reduces fibrotic and malignant patterns development. Likewise, PFD induces SIRT1 expression and nuclear translocation along with H3K9 and H3K14 deacetylation, compacting chromatin and possibly down expression of oncogenes. These results demonstrate the capability of PFD to regulate epigenetic hallmarks on histones.

https://doi.org/10.1016/j.aohep.2023.101208

P-22 UNCOVERING INSIGHTS ON ACUTE VARICEAL HEMORRHAGE: A CROSS- COUNTRY SURVEY STUDY ON THE MANAGEMENT OF UPPER GASTROINTESTINAL BLEEDING IN LATIN AMERICA

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Introduction and Objectives: Acute variceal hemorrhage (AVH) is a serious complication of portal hypertension and is associated with high mortality and high cost. Limited information exists regarding AVH management in Latin America (LATAM). This study aimed to gather data on AVH management and resource availability across LATAM. The goal was to bridge the knowledge gap, enhance medical attention, and optimize specialized care for patients with AVH in the region.

Materials and Methods: A survey was conducted using Microsoft Forms with recruitment via social media invitations and collaboration with local medical associations. It gathered data on demographics, clinical practices, and specialized resource availability. The LATAM countries were classified based on economic development (World Bank's classification system). Variables are described using percentages or medians and interquartile ranges and compared among socioeconomic regions using a chi-square test or analysis of variance as appropriate.

Results: In total, 798 respondents from 20 LATAM countries completed the survey. The median age was 39 years, with 80% attending specialists, 14% residents, and 6% fellows. Countries were represented by 6% high-income, 72% upper-middle income, and 21% lower- middle income populations. Gastroenterology (62%) was the predominant specialty, followed by internal medicine (23%), gastrointestinal endoscopy (18%), and hepatology (18%). Tertiary care centers accounted for 45% of the participants primary activities, followed by second-level care (30%) and private practice (21%). As for the existence of endoscopy suites, there were no differences between surveyed countries but their availability 24/7 remains higher in high income countries. The availability of vasoactive drugs correlated with economic development. The detailed findings are presented in Table 1.

Conclusions: In LATAM, the absence of standardized protocols, limited resources, and expertise pose challenges in AVH management. Enhancing access to specialized care and implementing standardized protocols is crucial to improve patient outcomes in the region.

Table 1 Most relevant answers to the survey, countries are divided according to their socioeconomic income according to The World Bank.

Question surveyed	Answer	High income (n=47)	Medium High income (n=565)	Medium Low income (n=162)	Puerto Rico (n=15)	p*
Availability of endoscopy unit	Yes	44 (94%)	505 (89%)	152 (94%)	15 (100%)	0.2
Availability of endoscopy service 24/7	Yes	36 (77%)	287 (51%)	104 (64%)	10 (67%)	<0.001
Routine correction of INR pre - endoscopic therapy	Yes	17 (36%)	210 (37%)	60 (37%)	7 (47%)	>0.9
Hemoglobin level threshold for indicating blood transfusion	7 g/dL	34 (72%)	473 (84%)	138 (85%)	13 (87%)	0.13
	8 g/dL	11 (23%)	72 (13%)	20 (12%)	2 (13%)	
	9 g/dL	1 (2.1%)	15 (2.7%)	1 (0.6%)	0 (0%)	
	10 g/dL	1 (2.1%)	5 (0.9%)	3 (1.9%)	0 (0%)	
Routine platelet for endoscopic band ligation when lower than 50x10^9 cells/L	Yes	15 (32%)	310 (55%)	96 (59%)	4 (27%)	0.01
Availability of vasoactive drugs (e.g. terlipressin, somatostatin, octeotride)	Yes	43 (91%)	443 (78%)	107 (66%)	15 (100%)	<0.001
Pharmacologic therapy before endoscopic therapy	Yes	30 (64%)	410 (73%)	108 (67%)	14 (93%)	0.003
Waiting time in hours in emergency department before endoscopic therapy	< 6 hours	18 (38%)	93 (16%)	21 (13%)	0 (0%)	
	6 - 12 hours	20 (43%)	241 (43%)	79 (49%)	8 (53%)	
	> 12 hours	8 (17%)	190 (34%)	55 (34%)	7 (47%)	

* Chi square test of Pearson; Exact Fisher test

https://doi.org/10.1016/j.aohep.2023.101209

P- 23 HEPATOCELLULAR CARCINOMA IN CENTRAL AMERICA: EPIDEMIOLOGY OF A COSTA RICAN COHORT

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is the fourth leading cause of cancer-related mortality worldwide and a major problem in Latin America. It is characterized by significant epidemiological heterogeneity, but most data come from resource-rich countries. This is the largest cohort to date reporting HCC characteristics and outcomes in Central America.

Materials and Methods: Retrospective analysis of a cohort of HCC diagnosed radiographically or histologically and analysis of daily practice from a specialized Costa Rican center.

Results: From 10/2018 to 03/2023, 200 patients with HCC were evaluated. The median age at diagnosis was 67 years and 61% were men. The most common etiologies were NAFLD, alcohol, viral hepatitis, and autoimmune hepatitis (63, 22, 5 HBV, 4 HCV, and 3%, respectively), 67% had arterial hypertension, and 60% DM2. Diagnosis was 55% incidental (53% ultrasonography and 2% CT/MRI), 45% during surveillance (40% US, 3.5% CT/MRI and 1.5% AFP increase with negative US) and 42% had a significant elevation of AFP (20 ug/L). Child-Pugh Score was 54, 33 and 6% for A, B and C respectively and 7% were non-cirrhotic (71% NAFLD). The modified BCLC staging system for HCC in cirrhotic liver was 3, 46, 17, 22, and 12% for stage 0, A, B, C, and D, respectively. Being diagnosed during surveillance was significantly associated with a curable BCLC stage (0 or A) (p=0.003) but not with better overall survival (p=0.18).

Conclusions: This study represents the largest cohort to date reporting HCC characteristics in Central America. Most HCCs are diagnosed incidentally and in a non-curable stage. Health policies should be directed based on the epidemiological factors identified in order to reduce the mortality of these patients.

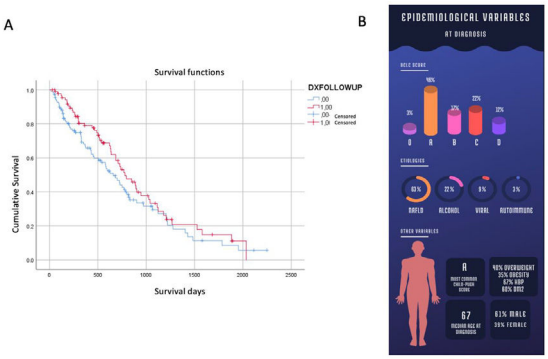

Figure 1: A. Kaplan Meier survival analysis of patients with HCC diagnose incidentally (blue line) vs under surveillance (red line) (p=0.18). B. Epidemiological variables at diagnosis.

https://doi.org/10.1016/j.aohep.2023.101210

P- 24 DISTRIBUTION OF HEPATITIS C GENOTYPES IN THE ARGENTINE POPULATION IN THE LAST TEN YEARS

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Introduction and Objectives: Hepatitis C virus (HCV) consists of 7 genotypes and multiple subtypes. With the introduction of pan-genotypic direct-acting antivirals (DAAs), the utility of genotype as a prognostic factor for treatment tends to be less relevant. However, it is useful for those patients who require a second DAAs regimen. In Argentina, there are few reports on the prevalence of HCV genotypes, which indicate a varied and changing distribution in different cities. This study aimed to determine the frequency of HCV genotypes in different cities of Argentina in the last ten years.

Materials and Methods: Retrospective cross-sectional study of HCV genotypes performed by sequencing the 5′ untranslated region of the viral genome in 1.178 samples assayed in the periods 2013-2017 and 2018-2023, taken in clinical analysis laboratories in different cities of Argentina: Rosario (RO, n=465), Villa María (VM, n=173), Mar del Plata (MDQ, N=111), Córdoba (COR, n=384) and Ramos Mejía (RM, n=45). Frequencies between periods were compared using Fisher's test.

Results: The frequencies of each genotype are presented in the Table. There is a variation among cities that is maintained in both periods, with the exception of MDQ. An increase in the frequency of G3 is observed in the 2018-2023 period, although it was not statistically significant.

Conclusions: The present study updates the knowledge on the distribution of HCV genotypes in Argentina, showing a variation among cities. The frequency of G3a, at present the most difficult genotype to treat, could be rising. Surveillance studies with a larger number of samples would be necessary to confirm this hypothesis. VM frequencies confirm the existence of foci with high prevalence of certain genotypes in some cities, as previously reported. It is necessary to continue monitoring the circulation of HCV genotypes even after DAAs usage and their consequent impact on public health.

	2013-2017 %(n)					2018-2023 %(n)				
Genotype/City	RO	VM	COR	MDQ	RM	RO	VM	COR	MDQ	RM
1a	16,1 (53)	10,0 (8)	14,5 (8)	42,2 (19)	23,5 (4)	14,0 (19)	7,5 (7)	17,6 (58)	28,8 (19)	21,4 (6)
1b	21,9 (72)	2,5 (2)	38,2 (21)	8,9 (4)	17,65 (3)	23,5 (32)	1,1 (1)	27,1 (89)	24,2 (16)	21,4 (6)
2	36,2 (120)	87.5 (70)	36,4 (20)	20,0 (9)	23,5 (4)	33.1 (45)	90.3 (84)	42,5 (140)	12,1 (8)	25,0 (7)
3a	21,9 (72)	-	7,3 (4)	26,7 (12)	17,65 (3)	27,2 (37)	1,1 (1)	10,6 (35)	31,8 (21)	25,0 (7)
4	3,6 (12)	-	3,6 (2)	2,2 (1)	17,65 (3)	2,2 (3)	-	2,1 (7)	3,0 (2)	3,6 (1)
5							-			3.6 (1)
n Total	329	80	55	45	17	136	93	329	66	28

Table: Distribution of HCV genotypes.

https://doi.org/10.1016/j.aohep.2023.101211

P- 25 METABOLIC, HISTOLOGICAL AND INFLAMMATORY BENEFITS IN A MURINE MODEL OF ALCOHOLIC STEATOHEPATITIS USING METHYL-GROUP DONOR SUPPLEMENTATION

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Introduction and Objectives: Chronic alcohol consumption causes alcohol-related liver disease (ARLD) ranging from fatty liver, alcoholic hepatitis to cirrhosis, and HCH. Currently, the main treatment for alcohol-related liver disease is abstinence; then it becomes necessary to evaluate therapeutic alternatives. Micronutrients known as methyl group donors have the potential to influence the development and progression of several diseases, including ARLD. This study aimed to evaluate the effect of chronic alcohol consumption coupled with methyl-group donor supplementation on metabolic and histologic features and gene expression of proinflammatory cytokines in a murine model of ARLD.

Materials and Methods: 24 male C57BL/6J mice with an initial weight of 20-25g were divided into groups with a conventional diet (ND n=8); or alcohol- related liver-injury was induced with ad libitum consumption of a 20% ethanol-aqueous drink and a 45%-fat diet (OH n=8) for 18 weeks; or with ethanol drink and the diet high in fat for 10 weeks, plus 8 additional weeks of this diet plus methyl group donor orogastric supplementation -zinc sulfate, methionine, vitamin B12, folic acid, betaine and choline- (OH +METMIX n=8). Serum biochemical studies and hepatic and adipose histological analyzes were performed. In the liver, mRNA levels of IL6 and TNFa were quantified.

Results: Supplemented animals showed a decrease in body weight, epididymal fat and serum levels of cholesterol, HDL and LDL ($p<0.05$). Meanwhile, AST, ALT, TG and VLDL, as well as IL-6 and TNF-mRNA and the hormones insulin, leptin, glucagon and resistin showed a tendency to decrease in the METMIX group.

Conclusions: Treatment with methyl-group donors improves body weight, body composition, cholesterol, LDL and HDL concentrations exerting beneficial and protective effects even with continuous consumption of an ethanol-aqueous drink.

https://doi.org/10.1016/j.aohep.2023.101212

P- 26 FIBROSIS FREQUENCY IN A COHORT OF METABOLIC FATTY LIVER DISEASE RISK PATIENTS

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Introduction and Objectives: Metabolic fatty liver disease is the most important cause of chronic liver disease with estimated global prevalence of 25% and a latin America prevalence of about 44%. This study aimed to evaluate frequency of fibrosis in risk patients for metabolic liver disease in tertiary center, stratifying grades and presence of risk factors .

Material and Methods: Cross sectional study after informed consent. Clinical examination, bioimpedance and non invasive approach for fibrosis diagnosis by biomarkers and ultrasonography elastography were performed.

Results: Sixty nine patients were included, with 82% women and median age of 63 years. The BMI median was 31 kg/m^2. Significative fibrosis was present in 30,4% of patients by ultrasonography elastography. Twenty five percent of patients were classified as indeterminated zone fibrosis by FIB 4 and 8,7% with definitely advanced fibrosis risk by Fib4. APRI test results were, respectively, 18,5% and 2,1 %. Fibrosis risk was not associated to steatosis grade but to body corporal fat percentage and serum ferritin.

Conclusions: Our study evidenced approximately a tier of tertiary hospital patients at risk for metabolic fatty liver disease to have fibrosis using ultrasonography elastography. Biomarkers (FIB4 and APRI tests) had a lower frequency for fibrosis identification. Risk factors for fibrosis identified were body fat corporal percentage and serum ferritin.

	Fibrosis absent N 51	Fibrosis present N 18	N 69
HAS	84%	83%	NS
DM/ pré DM	66%/23%	77%/ 11%	NS
Obes	52%	50%	NS
Metabolic syndrome	80%	72%	NS
GGT	32 (25/45)	48,5 (27,5/78)	NS
ALT	20 (15,5/26)	25 (19/46)	p=0,08
AST	19 (16/23)	26 (20/36)	p=0,016
Vit D	26,9 (24/34)	23 (17/28)	p=0,06
Ferritin	146 (93/242)	80 (40/136)	p=0,04
% GC	44,6 (38/49)	46 (45/49)	P=0,02
EHT	5,05 (4,6/5,9)	8,8 (7,6/13,1)	-
Point SWE	0,81 (0,75/0,94)	1,7 (1,4/2,3)	-
2D SWE	5,2 (4,1/6,1)	8,0 (7,8/11)	-
CAP	287 (257/327)	297 (241/342)	NS

https://doi.org/10.1016/j.aohep.2023.101213

P-27 DESCRIPTIVE STUDY ON PATIENTS WITH HEPATOCARCINOMA IN A PUBLIC HOSPITAL 2018-2023

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most frequent malignant tumor of the liver. Patients with chronic liver damage (CLD) are at increased risk of HCC. Periodic screening seeks to increase survival. In Chile, information about patients with HCC is still scarce. This study aimed to describe clinical and epidemiological characteristics of patients with HCC from a public hospital in Santiago-Chile, during 2018-2023.

Materials and Methods: retrospective descriptive study on patients with HCC presented to the oncology committee, based on the hospital system's database. Analysis of variables age, sex, presence and characteristics of CLD, screening, tumor characteristics, treatment and survival, and statistical associations with the SPSS program.

Results: 114 patients were registered (56% men), with a mean age of 69 years. At diagnosis: 90% had CLD, 33% were diagnosed by screening, 51% with Child-Pugh A score, 52% had only one focal lesion, and the mean tumor size was 6.8 cm. More than 90% were not candidates for transplantation due to the Milan criteria and/or functionality (ECOG). 2 patients were transplanted; 54% were only eligible for palliative care. 64% had died at the time of the study, with an average survival of 179 days (range 1 – 886 days); 68% died within 6 months. There was a higher survival in Child-Pugh A versus C patients, and in screened versus non-screened patients (mean 278 vs. 150 days, respectively), both statistically significant (p<0,05).

Conclusions: The diagnosis of HCC continues to be late, with a low percentage of diagnosis through screening in patients with CLD, decreasing their survival, and with low access to curative therapy and liver transplantation. These data will be used to design a prospective model in order to improve the diagnosis and management of these patients.

https://doi.org/10.1016/j.aohep.2023.101214

P-28 HEPATOTOXICITY OF PESTICIDES USED IN VITICULTURES IN THE SOUTHERN BRAZIL REGION

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Introduction and Objectives: Consumption of pesticides in the world has been growing exponentially, driven by green revolution, since the 40′s. In this context, impact of use of these products in human beings becomes a public health problem. Ethylene bisdithiocarbamates (EBDCs), such as Mancozeb, are fungicides used in Serra Gaúcha for vine cultivation. This study aimed to evaluate hepatotoxicity of pesticides from EBDC group in viticulture workers exposed to and not exposed to in southern Brazil.

Materials and Methods: Evaluation of 50 exposed and 48 non-exposed workers through interviews with application of a questionnaire, blood and urine collection. Subsequently, evaluation of hepatotoxicity (biochemical test), genotoxicity (DNA damage), acetylcholinestarase and biological exposure indicator (urinary ethylenethiourea) was carried out. Sample calculation and statistical analysis performed based on the effect size, with alpha-error 0.05% and power 90%.

Results: In non-exposed group, 70% were men, more than 90% were white, and 39.5% had only completed elementary school. We identified 50% as overweight/obese. In this group, 9 participants stated that they had been exposed to pesticides in past (> 5 years ago) with a report of one intoxication episode with symptoms. In the exposed group, 92% were men, 100% white and 44% reported having only completed elementary school. Furthermore, overweight/obesity was identified in 78%. Changes in liver function tests (AST/ALT) were present in 5 samples from exposed group (4 in overweight and/or obese participants). In 100% of participants was present biological

exposure indicator, including the non-exposed group. No change was identified in analysis of acetylcholinesterase in exposed group. Evaluation of DNA damage related to genotoxicity was significantly higher in pesticide exposure group.

Conclusions: Preliminary analyzes suggest that exposure to mancozeb is capable of causing damage to the worker's health, and may occur outside the occupational environment, since ethylenethiourea was identified even in urine samples from non-exposed group to the pesticide.

https://doi.org/10.1016/j.aohep.2023.101215

P-29 INCIDENCE AND ASSOCIATED FACTORS OF HEPATOCELLULAR CARCINOMA IN PATIENTS WITH CHRONIC HEPATITIS B INFECTION IN A SINGLE CENTER IN PERU: A RETROSPECTIVE STUDY.

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Introduction and Objectives: Chronic Hepatitis B infection represents an isolated risk for the development of hepatocellular carcinoma. This study aimed to investigate the incidence of hepatocellular carcinoma and associated factors in patients with chronic Hepatitis B infection with at least 5-year follow-up.

Materials and Methods: Retrospective study. Patients with chronic hepatitis B infection with or without cirrhosis, who were treated at the Liver Unit of the National Hospital Arzobispo Loayza and had at least 5-year follow-up, were enrolled. Predictive scores for hepatocellular carcinoma such as REACH-B, PAGE-B, mPAGE-B, aMAP, CU-HCC, GAG-HCC, and LSM-HCC were calculated at enrollment. The crude and cumulative incidence of hepatocellular carcinoma in the study population was determined.

Results: 68 patients, 51.5% were males, and 25% had cirrhosis. The average age was 46.24 years. The incidence of hepatocellular carcinoma was 2.94% with a cumulative incidence of 0.51 person-year. In the univariate analysis, increased liver stiffness (kPa) (OR:1.1 (95% CI: 1.001 - 1.3), p<0.05) and lower albumin (g/dL) was associated with an increased risk of hepatocellular carcinoma.

Conclusions: The incidence of hepatocellular carcinoma was 2.9%. Increased liver stiffness and lower albumin, signs of cirrhosis, were predictive factors of hepatocellular carcinoma.

Table
Univariate analysis of hepatocellular carcinoma

	Univariate analysis OR (95% CI)
Age	1.08 (0.99 - 1.2)
Sex	
Female	Ref
Male	0.9 (0.03 - 24.4)
Albumin (g/dL)	0.8 (0.5 - 0.9)*
Platelets x10^9/L	0.9 (0.9-1)
Bilirubin (umol/L)	1.1 (0.9-1.2)
Liver stiffness measurement (Kpa)	1.1 (1.001-1.3)*

* $p < 0.05$

https://doi.org/10.1016/j.aohep.2023.101216

P- 30 IMPACT OF SELF-REPORTED ANCESTRY IN HEPATOCELLULAR CARCINOMA IN HISPANIC POPULATIONS

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Introduction and Objectives: Hepatocellular carcinoma (HCC) related to non-alcoholic fatty liver disease (NAFLD) is a growing health concern in Latin America. This region has a mixed population with a diverse heritage that is rarely accounted for when looking at epidemiological studies. We aimed to assess the differences in the epidemiology and outcomes of HCC in Latin Americans based on self-reported ancestry.

Materials and Methods: We retrospectively evaluated data from the ESCALON network, which prospectively follows patients in South America. Self- reported ancestry data was categorized as European, Amerindian, African, Asian, Indigenous, or other. For this study we divided ancestry into two categories: European and non-European.

Results: 429 individuals with HCC from 6 countries were studied: Argentina (34% n=145), Chile (15% n=66), Ecuador (15% n=63), Peru (15% n=66), Colombia (14% n=60), and Brazil (7% n=29). The median age was 68 years and 65% were male. In those of European ancestry (31% n=131) median age was 66 years and 72% were male. In the non-European ancestry cohort (69% n=298) median age was 67 years and 62% were male. The most common causes of underlying liver disease were hepatitis C virus (38%), followed by alcohol use disorder (25%) in European ancestry and NAFLD (52%) followed by alcohol use disorder in non-European ancestry (23%). Both groups, European and non-European ancestry, had similar proportion of HCC diagnosed under surveillance (40% and 41% respectively) and similar presence of extrahepatic disease (47% and 50% respectively). 26% of those with European ancestry received curative therapy compared to 33% of those with non-European ancestry.

Conclusions: This is the first study addressing ancestry in Latin Americans with HCC. We found that HCC related to NAFLD was more common in patients of non-European descent. Future studies are warranted to better understand the impact of genetics within specific regions of the continent to understand the risk of HCC.

https://doi.org/10.1016/j.aohep.2023.101217

P-31 METHOTREXATE SEEMS NOT TO BE ASSOCIATED WITH LIVER FIBROSIS IN RHEUMATOID ARTHRITIS PATIENTS

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Introduction and Objectives: Methotrexate (MTX) is the first-line treatment for rheumatoid arthritis (RA). Long-term usage of MTX may lead to liver injury, including the development of progressive liver fibrosis. Nevertheless, the prevalence of this adverse event and its associated risk factors remains unclear in RA patients. This study aimed to investigate the risk of long-term MTX therapy on liver fibrosis in patients with RA.

Materials and Methods: A cross-sectional study was conducted among patients with RA recruited from a rheumatology outpatient clinic. Liver fibrosis was assessed using transient elastography. Only patients who had received MTX were included in the study. Patients with a history of alcohol consumption or with known liver diseases were excluded.

Results: A total of 128 patients (91.4% women) with a mean age of 60 ± 12 years were enrolled. The duration of MTX therapy ranged from 3 to 306 months (median 106, interquartile range [IQR] 106). MTX was currently being used by 52% of the patients, with a median cumulative dose of 8022 mg (IQR 9363).

Comorbidities among the participants included diabetes mellitus (21.1%), arterial hypertension (63.3%), dyslipidemia (77.2%), metabolic syndrome (60.3%), and a history of tobacco use (31.3%). The median liver stiffness was 4.9kPa (IQR 2.2). Liver stiffness 8.0kPa was observed in 12.5% of the patients and was found to be associated with a history of tobacco use (p=0.004) and larger waist circumference (p=0.001). Liver stiffness showed a positive correlation with waist circumference (Rho = 0.220, p=0.014), while MTX cumulative dose showed a positive correlation with alanine aminotransferase levels (Rho = 0.250, p=0.005).

Conclusions: 12.5% of the patients with RA exposed to long-term MTX therapy exhibited liver stiffness 8kPa. Tobacco use and larger waist circumference were identified as risk factors for liver fibrosis, while MTX cumulative dose was not associated with progressive liver fibrosis.

https://doi.org/10.1016/j.aohep.2023.101218

P- 32 VALIDATION OF LILLE-4 VERSUS LILLE-7 TO PREDICT SHORT-TERM MORTALITY IN PATIENTS WITH SEVERE ALCOHOLIC HEPATITIS

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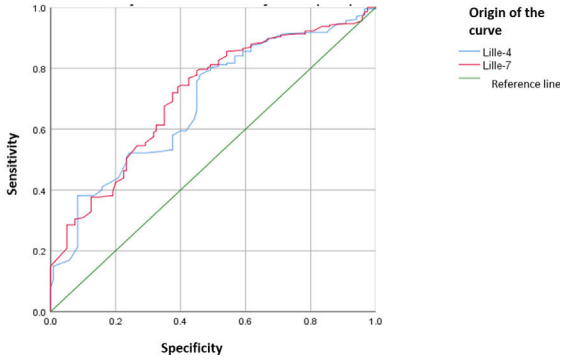
Introduction and Objectives: It has been proposed to calculate the Lille score on day 4 (Lille-4), which supposedly has comparable accuracy to the Lille score calculated on day 7 (Lille-7) for alcoholic hepatitis (AH). However, this finding has not been validated. This study aimed to validate the use of Lille-4 in predicting response to steroid treatment in patients with severe AH in the Mexican population, with the aim of reducing the risk of secondary complications associated with their use.

Materials and Methods: Observational, prospective, ambilective, analytical, cohort study from January 2010 to April 2023. Clinical and biochemical variables were collected upon admission, and Lille models were calculated to evaluate response and 28-day mortality. Comparative analyses were performed based on survival versus mortality. Sensitivity, PPV, NPV and accuracy of the models were calculated.

Results: A total of 327 patients were included, 297 (90.8%) men. The mean age was 43.4±9.3 years, and the 50th percentile for alcohol consumption was 320 g/day (5th-95th percentile:100.8-662). At day 28, 207 patients (63.3%) died. Upon admission, patients who died showed a significant difference compared to survivors in: Maddrey(90[95%CI:81-99]vs.70[95%CI:65-75];p<0.0001), ABIC (8.8±1.8vs.8.1±1.3; p<0.0001), MELD(32±8vs.27±4;p<0.0001), and MELD-Na(33±6vs.30±4;p<0.0001). The AUROC for Lille-7 was 0.71[0.65-0.77], where a value >0.45 had a sensitivity (S) of 78% and specificity (E) of 45% for predicting early mortality. Lille-4 had an AUROC of 0.68[0.63-0.74], where a value >0.45 had an S=81% and E=54% (Figure 1).

Conclusions: Lille-7 showed higher accuracy, in predicting early mortality in severe AH. Therefore, the determination of total bilirubin should not be before day 7, and steroid therapy should be provided to patients for up to 7 days to classify treatment response.

Figure 1. Area Under the Receiver Operating Characteristic Curve (AUROC) of Lille-4 and Lille-7 for predicting 28-day mortality.



https://doi.org/10.1016/j.aohep.2023.101219

P- 33 FREQUENCY, PROPHYLAXIS AND MANAGEMENT OF VARICEAL BLEEDING IN PATIENTS WITH LIVER CIRRHOSIS IN A RETROSPECTIVE MULTICENTER COHORT FROM SOUTH AMERICA

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Introduction and Objectives: Variceal bleeding (VB) is one of the main causes of morbidity and mortality associated with portal hypertension (PHT) complications in patients with liver cirrhosis. There is scarce information from South America on the frequency, primary prophylaxis and treatment of this complication. This study aimed to know the frequency of VB as the first cause of decompensation in patients with liver cirrhosis, and to describe the primary prophylaxis and management of VB.

Materials and Methods: We conducted a retrospective cohort study that included 1061 patients from 8 centers in five South American countries. Data from medical records collected in a template form in REDCAP were evaluated. Patients with a confirmed diagnosis of liver cirrhosis by clinical, laboratory, imaging and/or pathology data were included. VB was defined according to endoscopic and clinical criteria of each center. Endoscopic findings were classified according to Baveno and Sarin criteria.

Results: 206 (19%) patients presented VB during evolution and it was the first cause of decompensation in 177 (17%) patients. 53 (26%) patients with history VB had received primary prophylaxis with endoscopic ligation due to intolerance to beta-blockers. In 186 (90%) patients bleeding was attributed to esophageal varices and in 20 (10%) patients to gastric varices. During the VB episode, 96 (47%) patients received treatment with splanchnic vasoactive agents (terlipressin n=50, octreotide n=45 and somatostatin n=1). Three patients (1.5%) required TIPS placement as part of the management of bleeding. 48 (23%) patients died withing 1-year follow-up from bleeding.

Conclusions: VB was the first decompensation in 1/5 of patients with liver cirrhosis. A significant proportion of those patients received primary prophylaxis with endoscopic ligation. During BV, less than half of the patients received splanchnic vasoactive and TIPS placement was infrequent. More data are needed to evaluate the management of complications of liver cirrhosis in our region.

https://doi.org/10.1016/j.aohep.2023.101220

P- 34 TOMOGRAPHIC ASSESMENT OF SARCOPENIA IN CIRRHOTIC PATIENTS BEFORE LIVER TRASPLANT: PREVALENCE, ASSOCIATED FACTORS AND POST-SURGERY OUTCOMES IN A COHORT OF CHILEAN PATIENTS

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Introduction and Objectives: Sarcopenia is associated with worse outcomes in cirrhotic patients after liver transplant (LT). Recent studies have shown that tomographic assessment (TA) of sarcopenia is useful in cirrhosis. However, there is insufficient evidence regarding TA use in Latin American cirrhotic patients. This study aimed to describe the prevalence of sarcopenia by TA, associated factors, and outcomes in a cohort of patients undergoing LT.

Materials and Methods: Retrospective cohort of cirrhotic patients underwent LT (March 2015 - August 2021) with available abdominal CT up to 6 months before surgery. Baseline characteristics were obtained from clinical charts. A radiologist performed TA of sarcopenia through muscle area measurement of psoas (PMA), paravertebral (PVMA), paraspinal (PSMA), and its respective indexes, with defined sarcopenia cut-offs according to previous literature. Length hospital stay (LoS) after LT and 1-year mortality were recorded. Descriptive statistics and regression models were used to report sarcopenia TA and its association with baseline characteristics and outcomes after LT.

Results: During the study period, 163 patients underwent LT, 59 of them met inclusion criteria. Median time between TA and LT was 30 days (IQR 7-65). Mean age was 55±11 years, 51% females, 36% non-alcoholic steatohepatitis, 21% hepatocellular carcinoma, median MELD score of 23 (IQR: 17-28). Prevalence of sarcopenia assessed by any tomographic index was 72% (65% PMA, 56% PMI, and 37% PSMI). The baselines characteristics associated with sarcopenia were age (OR = 1.061, p-value=0.034) and sex (all sarcopenic were males). One-year mortality was 19% (22% in sarcopenic vs. 12% in non-sarcopenic patients, OR=1.969, p-value=0.423). LoS was 26 days (IQR 15-101), being longer in survivors with sarcopenia (IRR = 1.706, p-value<0.001).

Conclusions: Sarcopenia is frequent in cirrhotic patients underwent LT (72%), being associated with older age and male sex. While sarcopenia in TA does not significantly increase mortality, it does prolong LoS in LT survivors.

https://doi.org/10.1016/j.aohep.2023.101221

P- 35 COMPLICATIONS ASSOCIATED TO THE LIVER TRANSPLANTATION IN PATIENTS WITH CIRRHOTIC CARDIOMYOPATHY

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Introduction and Objectives: Cirrhotic cardiomyopathy (CCM) is a complication of cirrhosis associated with increased risk of postoperative complications related to liver transplantation (LT). Its first manifestations are habitually unspecified and can be seen throughout stress situations. Its criteria were recently updated without studies of its prevalence in our population. This study aimed to characterized the population with cirrhotic cardiomyopathy according to the new

proposal criteria and evaluate the development of complications associated with liver transplantation.

Materials and Methods: A retrospective observational study in adult patients with cirrhosis after liver transplantation (2017-2022) with pre-liver transplantation echocardiogram available. It was determined CCM according to the Cirrhotic Cardiomyopathy Consortium 2020 considered as criteria of systolic dysfunction the presence of LVEF < 50% and diastolic dysfunction (DD) the presence of 3/4 of the following criteria (septal e' velocity < 7 cm/s, E /e' > 15, left atrial volume index (LAVI) > 34 ml/m2 and tricuspid velocity > 2.8 m/s).

Results: During the study period, 82 patients met inclusion criteria, of whom 8 (10%) fulfilled criteria for CMC. There were no patients with systolic dysfunction. In patients with CMC, it was observed a tendency, not significant, to higher complications of hepatorenal syndrome, heart failure and mortality post-liver transplantation. If we extend the definition of DD to only 2 of 4 criteria, the prevalence of CMC increased to 31%. Considering the latter classification, it was observed an increase in dialysis needs post-liver transplantation (36% vs. 14%; p = 0.03) and a non-significant higher development of cardiac insufficiency (20% vs. 9%; p = 0.164).

Conclusions: The CMC is frequent in cirrhotic patients' candidates to liver transplantation (10%). Its presence could imply higher risk of complications pre and post-liver transplantation.

N = 82	Cirrhotic cardiomyopathy N = 8 (%)	Non Cirrhotic cardiomyopathy N = 74 (%)
Demographic characteristics		
Male gender	5 (63)	43 (58)
Age (median; min-max)	59 (48 – 64)	60 (22 – 72)
Medical History		
Comorbidities		
Diabetes mellitus	2 (25)	23 (31)
Hypertension	2 (25)	18 (24)
Chronic kidney failure	1 (13)	6 (8)
Cirrhosis variables		
Etiology of cirrhosis		
Non –alcoholic steatohepatitis	3 (38)	31 (42)
Alcoholic steatohepatitis	2 (25)	8 (11)
Autoimmune	2 (25)	22 (30)
Viral	1 (13)	8 (11)
Other	0 (0)	4 (5)
Child-Pugh pre-liver transplantation		
A	0 (0)	8 (11)
B	3 (38)	25 (34)
C	5 (63)	41 (55)
Meld-Na pre-liver transplantation	22 (14 – 38)	23 (6 – 43)
Complications of cirrhosis		
Ascites	5 (63)	51 (69)
Infections	1 (13)	16 (22)
Spontaneous bacterial peritonitis	0 (0)	16 (22)
Varices	6 (75)	53 (72)
Upper gastrointestinal bleeding	2 (25)	23 (31)
Hepatic encephalopathy	5 (63)	49 (66)
Hepatorenal syndrome	3 (38)	14 (19)
Portal vein thrombosis	0 (0)	18 (24)
Hepatocarcinoma	2 (25)	31 (42)
Sum complications (median; min-max)	3 (2 – 4)	3 (1 – 8)
Immediate Post– liver transplantation variables (during hospitalization)		
Complications		
Heart failure	2 (25)	8 (11)
Chronic kidney failure	6 (75)	45 (61)
Dialysis	2 (25)	15 (20)
Days of hospitalization	16 (16 – 17)	24 (7 – 150)
Mortality	3 (38)	10 (14)

https://doi.org/10.1016/j.aohep.2023.101222

P- 36 ACUTE ON CHRONIC LIVER FAILURE IN LATIN AMERICA: SUB-ANALYSIS OF A SYSTEMATIC REVIEW AND META-ANALYSIS

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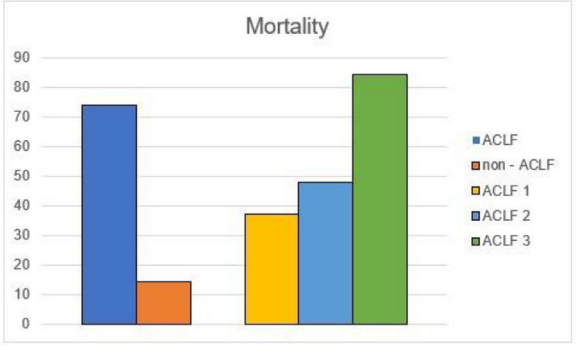
Introduction and Objectives: Acute-on-chronic liver failure (ACLF) is characterized by acute decompensation of liver cirrhosis associated with extrahepatic organ failure, and high short-term mortality. Previous studies have estimated a global prevalence of 35% with a mortality of up to 58% at 90 days of follow-up. There is sparse data of ACLF prevalence and mortality in Latin America using the European Association for the Study of Chronic Liver Failure (EASL-CLIF) criteria. This study aimed to characterize patients with ACLF in Latin America and estimate its prevalence and mortality.

Materials and Methods: Pubmed from 01/03/2013 to 08/02/2023 was searched for Latin American cohort studies on ACLF, using the EASL-CLIF criteria. With the data obtained the meta-analysis was performed.

Results: Six studies were included in the analysis, with a total of 817 patients hospitalized for decompensated cirrhosis. The mean follow-up time was 69.9 ± 31.5 days. ACLF prevalence was 29.3%, where 81.5% of these patients had presented previous decompensation. The two-most common liver disease etiologies were alcohol-related liver disease (43.1%), and viral hepatitis (36.5%). The most common triggers identified were infections (35.8%), and gastrointestinal bleeding (22.9%). In up to 28% of the cases, the trigger remained unknown. The main organ disfunctions were renal failure (51.2%), and circulatory failure (45.9%). Overall ACLF mortality was 74.0%, with up to 84.4% in patients classified as ACLF 3.

Conclusions: ACLF is a global important health-care problem including in Latin American. The prevalence of ACLF in our study is similar to the prevalence reported worldwide, but in this region, there is a higher mortality. Our results emphasize the importance of creating local management guidelines for patients with ACLF in Latin America.



https://doi.org/10.1016/j.aohep.2023.101223

P- 37 CLINICAL EVOLUTION OF PATIENTS WITH AUTOIMMUNE LIVER DISEASES IN A LIVER TRANSPLANTATION CENTER

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Introduction and Objectives: Autoimmune liver diseases (ALD) are entities with well-defined clinical, diagnostic and therapeutic characteristics, which share autoimmune phenomena in their pathogenesis. In their clinical evolution, when they are not controlled, they progress to cirrhosis and its complications. We aimed to describe the clinical evolution and long-term survival of patients with ALD.

Materials and Methods: A retrospective cohort study was carried out in 77 patients diagnosed with ALD, seen in the hepatology clinic of the Centro de Investigaciones Médico Quirúrgicas, between 2000 and 2022, with a mean follow-up of 9 years (minimum 2 and maximum of 19). The main variables were: initial stage, form of presentation, complications and clinical evolution. The data was processed with the statistical package SPSS version 19.0 on Windows, the analysis was carried out by calculating the mean, standard deviation and percentage, and for survival, the Kaplan-Meier method was used with a confidence interval of 95%.

Results: Of 77 patients studied, the most frequent entity was autoimmune hepatitis (AIH) (61.3%), followed by primary biliary cholangitis (PBC) (24.7%). More than half of the patients with AIH and PBC had cirrhosis at the onset of the disease, of which 14.3% had decompensated cirrhosis. In the follow-up, the majority had liver complications; ascites was the most frequent in 53.2% and the insertion of cholangiocarcinoma stood out in 45.5% of the patients with Primary sclerosing cholangitis (PSC). The progression of the disease and the need for transplantation predominated in cholestatic diseases: PBC (89.5%/57.9%) and PSC (81.8%/36.4%), while AIH was the disease with the highest survival (59%) at 10 years.

Conclusions: The clinical evolution of the patients with ALD was determined by the presence of the advanced stage at the time of diagnosis, which conditioned a low survival in the long-term follow-up.

https://doi.org/10.1016/j.aohep.2023.101224

P- 38 HEPATITIS E VIRUS IN PATIENTS WITH CHRONIC LIVER DISEASE IN COLOMBIA

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Introduction and Objectives: Hepatitis E virus (HEV) can induce chronic hepatitis in individuals with immunosuppression and/or chronic liver diseases (CLD). In Colombia, HEV-3 has been detected in pigs, water, and human samples; nevertheless, no studies on individuals with CLD have been previously reported. This study aimed to describe the HEV infection frequency in CLD patients from Colombia.

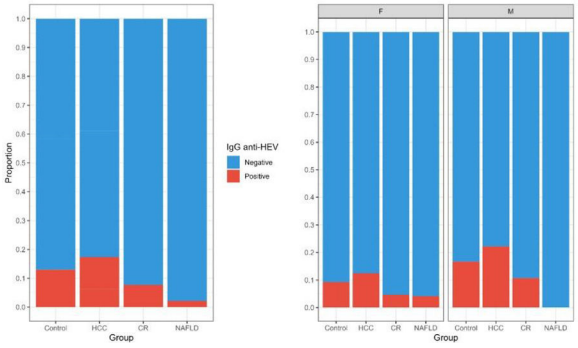
Materials and Methods: The presence of IgG anti-HEV by ELISA (Diapro, Italy) was evaluated in serum samples from 260 patients with CLD and 60 healthy controls, recruitet through the ESCALON project, in Colombia between 2020-and 2022. Causes of CLD included: hepatocellular carcinoma (HCC, n=60), cirrhosis (CR, n=120), and non-alcoholic fatty liver disease (NAFLD, n=80). Statistical analyses were performed using RStudio-2023.3.0.386 and statistical significance was defined at $p<0.05$.

Results: The mean age of patients with CLD was 64 years (range 18-89), 47.7% were male and 52.3% female. No significant differences were found in HEV seropositivity rates by sex or age.

The IgG anti-HEV prevalence in the group with CLD was 8.5% (22/260) vs. 10% (6/60) in the healthy control group. When stratified by cause of CLD, the prevalence was: 7.5% (9/120) in CR, 18.3% (11/60) in HCC, and 2.5% (2/80) in NAFLD (Fig.1). Overall, there was no significant difference between HEV seropositivity status in each CLD group when compared to the healthy control group, nor for the interaction between the variable group and age.

Conclusions: This is the first study addressing HEV in patients with CLD in Colombia. We found a similar prevalence of IgG anti-HEV between patients with CLD and healthy controls, with a higher trend only patients with HCC, although this difference was not statistically significant. Larger studies are needed to further elucidate the role of HEV in these populations, increase awareness of the virus and reduce underdiagnosis.

Fig. 1. Overall proportions and by sex [F (female), M (male)] of IgG anti-HEV positives in each group of individuals included in the study [Control, HCC (hepatocellular carcinoma), CR (cirrhosis), NAFLD (non-alcoholic fatty liver disease)].



https://doi.org/10.1016/j.aohep.2023.101225

P- 39 N-ACETYL CYSTEINE ATTENUATES ALTERATIONS GENERATED IN EXPERIMENTAL LIVER STEATOSIS INDUCED BY CHRONIC ALCOHOL CONSUMPTION PLUS A HYPERCALORIC DIET

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Introduction and Objectives: Metabolic disorders and alcohol consumption are the most common etiological agents in hepatic steatosis (HS). Metabolic alterations, oxidative stress, and inflammation are key mechanisms in the development of this disease. There is a few evidence that demonstrates the synergistic effects generated by both etiological agents. N-acetyl cysteine (NAC) is an antioxidant used clinically, whose efficacy in HS development induced by a hypercaloric diet plus alcohol consumption is unknown. This study aimed to evaluate NAC effects on oxidative stress, and metabolic alterations induced in HS generated by ethanol chronic consumption plus a hypercaloric diet in a mouse model.

Materials and Methods: Male mice (C57BL/6J, n=4) were divided into 3 groups. 1) Control, mice fed with a conventional diet and water ad libitum; 2) HF/OH, mice fed a hypercaloric diet, and 20% ethanol; 3) HF/OH+NAC, mice with the same treatments of HF/OH group, and NAC (300 mg/kg/day, p.o.). All treatments lasted 5 months. Serum biochemical markers were determined: AST, ALT, cholesterol, HDL, LDL, triglycerides, leptin, ghrelin, insulin, resistin, and GLP1; also, oxidative stress parameters such as MDA, and SOD, CAT and Nrf2 proteins expression were analyzed through colorimetric assays, and western blot. Finally, H&E staining was performed in liver samples.

Results: NAC prevents weight gain and metabolic alterations generated by concomitant consumption of a hypercaloric diet and alcohol; it also modulates changes in anorexigenic and orexigenic adipokines. On the other hand, NAC reduces the oxidative environment induced by both etiological agents and prevents tissue alterations in hepatic parenchyma.

Conclusions: NAC ameliorates alterations in processes related to establishment of HS induced by ethanol chronic consumption plus a hypercaloric diet. Its pharmacodynamic mechanisms go beyond its antioxidant capacity.

https://doi.org/10.1016/j.aohep.2023.101226

P- 40 PENTOXIFYLLINE USE IN PATIENTS WITH ALCOHOL-ASSOCIATED HEPATITIS ADMITTED WITH ACUTE KIDNEY INJURY COULD DECREASE SURVIVAL: A GLOBAL STUDY

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Introduction and Objectives: Alcohol-associated hepatitis (AH) is a severe entity with a mortality of up to 30−50% at 1 month. Pentoxifylline combined with steroids has not demonstrated benefits in severe AH. Some studies have suggested that pentoxifylline may be beneficial in the subgroup of patients with acute kidney injury (AKI) and AH. However, there is no solid evidence of its benefit in mortality in this setting. This study aimed to determine the benefit of the use of pentoxifylline in patients with severe AH and AKI.

Materials and Methods: Global retrospective cohort study, including patients with severe AH and AKI at admission (2009 −2019). We used competing-risk models with liver transplantation as a competing risk to assess the potential effect of pentoxifylline.

Results: We included 655 patients with severe AH and AKI (30 centers from 10 countries). Median age was 48±11.6 years, 26.2% were females, and 52.5% were Caucasian. Around 68.7% of the patients had a prior history of cirrhosis, and 6.6% underwent liver transplantation. The MELD score on admission was 34 [15−74]. 43.2% of the patients used corticosteroids, while only 6.9% used pentoxifylline during hospitalization. In the univariate analysis, the variables independently associated with mortality were the female sex (sHR 0.740; 95%IC:0.577−0.948; p=0.018), MELD (sHR 1.034; 95%IC: 1.020 −1048; p<0.001), MELD 3.0 (sHR 1.034,95%IC:1.018−1.049, p<0.001), Maddrey's discriminant function (sHR 1.005, 95%IC:1.003 −1.008, p<0.001), serum albumin at admission (sHR 0.756; 95%IC:0.642−0.890; p=0.001), bilirubin at admission (sHR 1.011; 95%IC:1.003−1.019, p=0.006), serum creatinine (sHR 1.083; 95%IC:1.028−1.140, p=0.002) and pentoxifylline use (sHR 1.531, 95%IC:1.107−2.119; p=0.010)(Table). In the multivariate-adjusted model, the use of pentoxifylline was associated with increased mortality (sHR 1.620, 95%IC:1.190−2.204; p=0.002).

Conclusions: The use of pentoxifylline has no benefit in terms of mortality and could decrease survival in patients with AH and AKI.

Table.- Univariate and multivariate competing-risk analyses. Mortality is the primary event, and liver transplant is the competing risk.

	Univariate analysis			Multivariate analysis		
Variables	**sHR**	**95% CI**	**p-value**	**sHR**	**95% CI**	**p-value**
Age (years)	1.005	0.996–1.014	0.231	1.013	1.003–1.023	0.006
Sex (Female)	0.740	0.577–0.948	0.018	0.802	0.618–1.040	0.097
MELD	1.034	1.020–1048	< 0.001	1.043	1.021–1.065	< 0.001
MELD 3.0	1.034	1.018–1.049	< 0.001	-		
mDF	1.005	1.003–1.008	< 0.001	-		
Cirrhosis	1.100	0.821–1.473	0.522	-		
Corticosteroids use	1.051	0.845–1.308	0.650	1.058	0.842–1.329	0.628
Albumin at admission	0.756	0.642–0.890	0.001	-		
Bilirubin at admission	1.011	1.003–1.019	0.006	-		
Serum creatinine	1.083	1.028–1.140	0.002	0.973	0.892–1.329	0.628
Pentoxifylline use	1.531	1.107–2.119	0.010	1.620	1.190–2.204	0.002

sHR: Subdistribution Hazard ratio; mDF: Maddrey's discriminant function.

https://doi.org/10.1016/j.aohep.2023.101227

P-41 IMPACT OF CHOLEMIC NEPHROSIS ON RENAL FAILURE IN CIRRHOTIC PATIENTS

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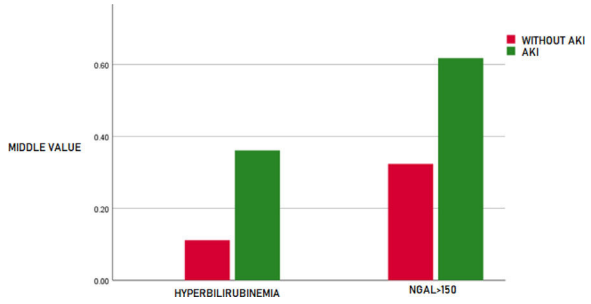
Introduction and Objectives: The development of acute kidney injury (AKI) in cirrhotic patients is of multifactorial origin, including urinary tract infections, diuretics, portal hypertension, shock, etc. Another important factor is cholemic nephrosis, which is considered when total bilirubin exceeds 20 mg/dl; this implies that bile pigments damage the distal tubule with deterioration of renal function, increasing morbidity and mortality. We aimed to evaluate the levels of hyperbilirubinemia in the development of AKI and its association with biomarkers of renal failure.

Materials and Methods: Retrospective and analytical study of a cohort of cirrhotic patients, to evaluate the development of AKI associated with bilirubin levels. Statistical analysis: A binary logistic regression model was performed considering bilirubin (greater than 20), NGAL (greater than 150), and cystatin (greater than 0.95) as associated factors. The significance of the model was considered with an alpha level of less than 0.05.

Results: 109 patients were included, 45 women 64 men, age 54.67 ± 11.6, Child-Pugh A: 2, B: 29, C: 78. The binary logistic model was significant W(1)=11.089, p=0.001. The OR for bilirubin was 4.37 (1.168-16.35, 95% CI P=.027), for NGAL OR 2.7 (1.08-6.71, 95% CI; p=.032) not significant, cystatin 0.64 (0.35-11.66, CI 95%; p=0.764).

Conclusions: Hyperbilirubinemia increases the risk of developing AkI by up to 4 times. The useful biomarker for AkI was NGAL Grouped Bar Graph: mean value of bilirubin and NGAL in patients with AKI



https://doi.org/10.1016/j.aohep.2023.101228

P- 42 METABOLIC ASSOCIATED FATTY LIVER DISEASE AND BODY COMPOSITION MEASUREMENT

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Introduction and Objectives: Metabolic associated fatty liver disease (MAFLD) is a metabolic and liver disorder with a prevalence of 30% and with significant potential to progress to hepatic steatosis, nonalcoholic steatohepatitis (NASH), fibrosis, cirrhosis and hepatocellular carcinoma. Visceral obesity is a risk factor for MAFLD and associated with disease severity. Previous studies have shown that anthropometric measures such as body mass index (BMI), neck circumference (NC), waist circumference (WC), waist-hip ratio (WHR) and body fat percentage (%BF) are predictors of MAFLD. We aimed to assess the prevalence of MAFLD and the role of anthropometric measurements as predictors and its association with liver fibrosis.

Materials and Methods: Adults over 18 years old assisted in Antonio Pedrós University Hospital, with risk of MAFLD (pre-diabetes, diabetes mellitus, metabolic syndrome, and obesity). Patient's clinical information, anthropometric, metabolic profiles were assessed. Non-invasive assessment of MAFLD was performed by ultrasound, elastography and bioelectrical impedance analysis (BIA).

Results: The group consisted of 73 subjects with 80.8% females. All data are presented as median (IQR) or n (%). Median age was 63 (53-67) years. The prevalence of obesity was 57.5%. Higher diabetes and dyslipidemia (69.8% and 65.7%, respectively). Hepatic steatosis was present in 79.4% of patients. Higher averages for the anthropometric measures that reflect visceral body fat were observed: NC 37.1 cm; WC 104.5 cm; BMI 31.4 kg/m2 in individuals with hepatic steatosis than those without the disease (NC median 35.7 cm; WC 95.5 cm; BMI 25.7 kg/m2). The frequency of liver fibrosis (F 2) was 23.2%. Anthropometric measures had no association with fibrosis, except % BF measure calculated by the BIA ($p< 0.02$).

Conclusions: Anthropometric measurements of visceral obesity, demonstrate to be an important risk factor for MAFLD. BIA a non-invasive and easily carried out method, could be useful as a screening test to identify individuals with MAFLD.

https://doi.org/10.1016/j.aohep.2023.101229

P- 43 HCV TESTING AND TREATMENT IN FOUR BRAZILIANS' CORRECTIONAL SETTINGS

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Introduction and Objectives: The unfavorable hygiene conditions and inadequate health monitoring in many prisons increase the risk of infections such as HIV, syphilis, tuberculosis, and hepatitis B or C. The prevalence of hepatitis C in prisoners worldwide was estimated to be 17.7% (1). Variable access to correctional healthcare resources, limited funding, high inmate turnover rates, and deficient follow- up care after release are a few factors that confound HCV control and prevention in this group. In Brazil, The Criminal Execution Law 7210 of July 11, 1984, in Article 14, grants inmates preventive and curative medical, dental, and pharmacological healthcare. This study aimed to investigate the prevalence of hepatitis C antibodies (HCV-ab) among the 4-prison population in Brazil's South region.

Materials and Methods: Participants were interviewed and opt-out provided blood samples and underwent rapid HCV testing and confirmatory testing when indicated. Persons with chronic infection were referred to treatment inside the correctional facility.

Results: In 2022, from October to December, 2,057 inmates were tested in 4 correctional facilities in Santa Catarina and Rio Grande do Sul State, with an overall prevalence of 2,52% (52/2,057), 3 times higher than in the general population in Brazil. In the prison with a higher number of tests (762) 95% of the inmates are female, the mean age of 34 y/o, and the HCV-ab prevalence (2,49%) was similar to males' prisons (2,54%).

Conclusions: It is necessary to control HCV in prisons by screening and treating prisoners to reach WHO 2030 elimination goals. Diagnosis of chronic HCV in correctional settings followed by linkage to care and successful antiviral treatment can ultimately reduce the risk of liver-related and extrahepatic complications and potentially decrease HCV transmission in correctional facilities and the community after release.

https://doi.org/10.1016/j.aohep.2023.101230

P-44 OUTCOMES AND MORTALITY OF PATIENTS WITH HEPATOPULMONARY SYNDROME AT A QUATERNARY LIVER TRANSPLANT CENTER

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Introduction and Objectives: Hepatopulmonary syndrome (HPS) is diagnosed in 5-32% of cirrhotic patients on the waitlist (WL) for liver transplantation (LT), which improves survival and hypoxemia. This study aimed to retrospectively analyze clinical, laboratory and radiological findings of HPS patients in transplantation WL, describing clinical outcomes.

Materials and Methods: HPS patients prioritized for LT [partial pressure of oxygen (PaO2)60mmHg] were included. Patients with insufficient data were excluded. Data collection is in progress, final results will be available at presentation.

Results: 24 patients were included; 54.2% female, mean age 49.5± 15.5y. The most common cirrhosis' etiologies were viral hepatitis (25.1%) and cryptogenic (16.7%). Diabetes (33.3%), hypertension (25%) and coronary disease (16.7%) were frequent. 5 patients had tobacco/smoke exposure. Mean MELD-Na at HPS diagnosis was 15.3±4.14. The most frequent cirrhosis' complications were hepatic encephalopathy (37.5%) and ascites (33.3%). Dyspnoea (91.7%) and digital clubbing (21.8%) were common findings at physical examination. The most prevalent imaging findings were pulmonary infiltrate (25%) and atelectasis (12.5%). Mean PaO2 at HPS diagnosis was 52.9± 6.5mmHg with oxygen saturation of 85.9±5.3%. 20 patients were submitted to LT. Mean time between diagnosis and LT was 292± 192d. 4 patients used garlic capsules, 12 used propranolol. Pre-transplant, PaO2 was 60.3±13.3 mmHg. 12 patients died, 9 were transplanted (at mean time of 193.6 ± 208.5d post-procedure). Non-transplanted patients had 75% mortality compared to 45% in LT group. Post-LT, PaO2 improved to 60±19.2 at 3m, 68.5±23.9 at 6m and 74.6±12.5 after 1y. The median PaO2 at diagnosis was lower in deceased patients (p=0.026). There was no difference in mortality according to sex, comorbidities, cirrhosis etiology and complications (p>0.05) or MELD-Na, (p=0.812). The mean time between diagnosis and LT had no impact in survival (p=0.16).

Conclusions: HPS is associated with a mortality of 75% without LT; LT is the ideal treatment, improving oxygenation and reducing mortality to 45%.

https://doi.org/10.1016/j.aohep.2023.101231

P-45 EVALUATION OF THE ALBI SCORE IN PATIENTS WITH HEPATOCELLULAR CARCINOMA TREATED WITH YTTRIUM-90 (90Y)

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Introduction and Objectives: Hepatocellular carcinoma (HCC) is the third cause of mortality worldwide. 10% of patients receive therapy with curative intent. There are loco-regional therapies to improve patient survival, such as (TACE) and radioembolization with Yttrium-90. There are prognostic scales, such as ALBI, to identify who will have a positive response to the treatment. We aimed to evaluate the potential of the ALBI index for HCC as a predictor of mortality and associate it with survival or complications in patients who received treatment with Yttrium-90, correlating with Child Pugh, MELD and MELD-NA scores.

Materials and Methods: 8 patients with cirrhosis and (HCC) were evaluated; 60% (4) women aged 50 ±12.5 years, Child Pugh 7 points, MELD 11, MELD-NA 11, MELD 3.0 12 and initial BCLC (B), received an average of 2 radioembolization sessions with (90Y) and ALBI was evaluated.

Results: 3 patients had a complete response, one with intolerance to the (90Y) who required a second line of treatment. The other patients presented progression of the disease, therefore, palliative treatment and complications treating the CHC were applied. 3 patients died, who obtained an ALBI score of .08 ± 0.27 (grade 3), which could be correlated with patient survival. After Yttrium- 90, the following final values were measured Child Pugh (8.86 ±2.61), MELD (15.43±7.13), Leukocytes (6.7±1.5), Hemoglobin (12.85±1.66), Platelets (76.71±42.16), Bilirubin (4.16 ±4.58), Albumin (2.58 ±0.55) without any significant difference.The only difference was in MELD-Na (17.43 ± 6.90) which can be due to the progression and complications of the cirrhosis itself. (Table 1)

Conclusions: The ALBI, Child-Pugh and MELD NA scores in the prediction of mortality, survival and complications development during the disease in patients' treatment with Yttrium-90 could be a prognostic factor. Studies with a larger group of patients are needed to correlate and obtain more significant results regarding the score of ALBI.

Table 1. Blood cytometry, Liver Functional Tests & cancer scales systems in patients with cancer and treatment transarterial radioembolization (TARE) with Yttrium-90 (n=7).

	Patients pre-TARE with Yttrium-90 (n=7)	Patients post-TARE with Yttrium-90 (n=7)				
Pattern (units)	Values (mean ± SD)	Values (mean ± SD)	t (gl)	P<0.05	IC 95%	Reference ranges
Age	70 ± 11.3	71.16 ± 11.14	-7.15 (6)	0.0003	-1.5 – -0.7	(Years old)
Gender						
• **Man**	4	4				n=7
• **Woman**	3	3				n=7
BCLC	18.86 ± 7.55	16.43 ± 10.27	.52 (6)	0.62	-8.9 – 13.84	BCL[+]
CHILD PUG	7.14± 1.46	8.86± 1.73	-1.86 (6)	0.11	-3.96 – 0.53	
MELD	11.29± 4.03	15.43± 7.13	-1.23(6)	0.26	-12.35– 4.06	
MELD NA	**10.86± 2.61**	**17.43± 6.90**	**-2.37 (6)**	**0.05***	**-13.34 – 0.20**	
MELD 3.0	12.29± 2.69	18.86± 9.85	-1.94 (6)	0.10	-14.85– 1.71	
ALBI	-.098± 0.11	.08± 0.27	-2.15 (6)	0.74	-0.38– 0.02	
Leukocytes (x10³/µL)	**3.97± 1.8*****	6.70± 1.5	-1.48 (6)	0.18	-7.24– 1.76	5 - 10
Hemoglobin (g/dL)	13.28 ± 1.66	12.85 ± 1.66	0.37 (6)	0.72	-2.38 – 3.24	13.5 – 18
Platelet (x10³/µL)	84.29± 28.79	76.71 ± 42.16	1.10 (6)	0.31	-9.23– 24.37	150 – 450
PT (seconds)	13.44 ± 2.72	**19.91 ± 9.60*****	-1.58 (6)	0.16	-16.46– 3.52	11.0 – 13.5
INR	**1.19± 0.18*****	**1.72 ± 0.80*****	-1.57 (6)	0.16	-1.34 – 0.29	≤1
Total Bilirubin (mg/dL)	**2.01± 1.42*****	**4.16± 4.58*****	-1.70 (6)	0.13	-5.24 – 0.94	0.2 – 1.2
Direct Bilirubin (mg/dL)	**0.94 ± 1.26*****	**2.48 ± 4.39*****	-1.24 (6)	0.26	-4.58– 1.49	0 - 0.2
No Direct Bilirubin (mg/dL)	**1.06± 0.36*****	**1.67± 0.85*****	-1.79 (6)	0.12	-1.44 – 0.22	0 - 0.8
ALT (UI/L)	**37.86± 18.52*****	**48.00± 22.46*****	-0.80 (6)	0.45	-40.99–20.70	10 - 35
AST (UI/L)	**49.43 ± 18.68*****	**112.14± 147.15*****	-1.08(6)	0.31	-204.12– 78.69	5 - 34
ALP (UI/L)	**170.29 ± 60.15*****	**497.86 ± 867.69*****	-1.02(6)	0.34	-1108.59 – 453.45	<138
Albumin (g/Dl)	3.02± 0.80	2.58± 0.55	1.11 (6)	0.30	-0.52 – 1.41	3.5 - 4.8

*** Outside clinical reference value // *Paired Samples t Test (pre-post) *P<0.05 // AST- Aspartate transaminase, ALT- Alanine transaminase, ALP- Alkoline phosphatase , GGT- Gamma-glutamyltransferase , INR*International Normalized Ratio, PT-Prothrombin time // [+]BCL PRE A=1, B=6 y POST BCL A=1, B=4 y C=2. //

https://doi.org/10.1016/j.aohep.2023.101232

P- 46 AMOUNT OF DIETETIC FAT AND CARBOHYDRATE TYPES RELATED TO HEPATIC STEATOSIS IN A GROUP OF MEXICAN ADULTS

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Introduction and Objectives: Some studies had described the relation between dietetic fats and carbohydrates with fatty liver

disease although any specific amount has not been stablished. This study aimed to analyze the amount and type of dietetic fat and carbohydrates related with hepatic steatosis in a group of Mexican adults in a typical diet.

Materials and Methods: In a group of Mexican adults without hepatic steatosis, a registered cross- sectional study INCMNSZ- 3794-21/22 consuming a typical diet, were applied food frequency questionnaires, anthropometry and transient elastography. If they had any chronic disease, uncontrolled diabetes, hypertension or thyroid disease, bariatric surgery or pacemaker, were not included. Dietary fat and carbohydrates were identified and quantified with The Food Processor software v11.11.32 (ESHA Co.); manually, the proportion of fats was classified according to WHO recommendations. Differences among steatosis group (CAP> 268 dB/m) were calculated with t- Student and a logistic regression to determine odds ratio with type and amount of nutrients related to hepatic steatosis.

Results: Of 321 participants, 200 were women; 162 had steatosis and were older, with higher BMI, waist circumference, fat mass and visceral fat (p=0.000); they also consumed more carbohydrates, total sugar and added sugars (113.8 g, 98.1 g and 52.6 g, respectively) compared to non- steatosis group (p=0.000). There were no statistical differences in total either type of fats. For carbohydrates were obtained OR= 2.44 (IC95% 1.4- 4.62, p=0.002), total sugar OR= 2.67 (IC95% 1.48-4.63, p=0.001) and added sugars OR= 2.68 (IC95% 1.49- 4.83, p=0.001).

Conclusions: Unlike fats, type and amounts of dietary sugars are relevant risk factors for hepatic steatosis in a typical Mexican diet. In this study, we identified the amount that could be related to damage for non- alcoholic fatty liver disease.

https://doi.org/10.1016/j.aohep.2023.101233

P- 47 ACCURACY OF MAFLD-S SCORE TO DIAGNOSE HEPATIC STEATOSIS IN A GROUP OF APPARENTLY HEALTHY PEOPLE.

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Introduction and Objectives: Non-invasive methods for diagnosing metabolic associated fatty liver disease (MAFLD), like Fatty Liver Index (FLI) are gaining attention due to their potential to diagnose patients and reduce healthcare costs. A recent development in non-invasive diagnostics is the MAFLD-S score, which utilizes clinical data exclusively to predict MAFLD risk. This study aimed to evaluate the accuracy of MAFLD-S to diagnose hepatic steatosis previously identified by transient elastography.

Materials and Methods: A cross-sectional study was conducted. Transient elastography with controlled attenuation parameter (CAP) threshold of >268 dB/m was performed to measure hepatic steatosis (HS). Medical histories and anthropometric measurements were collected, and both the MAFLD-S score and FLI were calculated for each participant using cut-off points of 0.548 and 60, respectively. Statistical analysis, including Spearman's correlation and receiver operating characteristic (ROC) curve analysis, was performed to evaluate the diagnostic of HS.

Results: The study included 513 participants, with 64% being females and a mean age of 41.4 years. Hepatic steatosis was diagnosed in 46% of the population using transient elastography. Significant correlations were observed between the MAFLD-S score and FLI (s=0.726, p=0.000) The MAFLD-S score demonstrated a sensitivity (Se) of 63% and specificity (Sp) of 80% for detecting hepatic steatosis, and an area under the curve (AUC) of 0.795; the predictive positive value (PPV) was 0.728 and the positive likelihood ratio (+LR) was 3.15. FLI demonstrated Se= 58%, Sp= 81%, AUC= 0.818, PPV= 0.726 and +LR= 3.11.

Conclusions: In a group of apparently healthy people, both MAFLD-S score and FLI exhibited significant performance to diagnose hepatic steatosis. Implementing this clinical score can aid in identifying individuals at prompt early intervention to improve patient outcomes. Additional research is required to assess the diagnostic performance of these scores in patients with MAFLD.

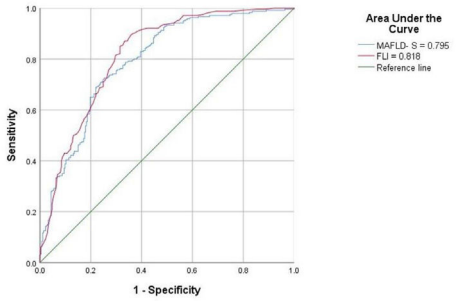

Figure 1. Performance of MAFLD-S and FLI scores for the diagnosis of hepatic steatosis compared to CAP.

https://doi.org/10.1016/j.aohep.2023.101234

P- 48 EFFECT OF THE COMBINATION OF ORLISTAT AND L-CARNITINE ON THE QUALITY OF LIFE (SF.36) IN 16 OVERWEIGTH PATIENTS

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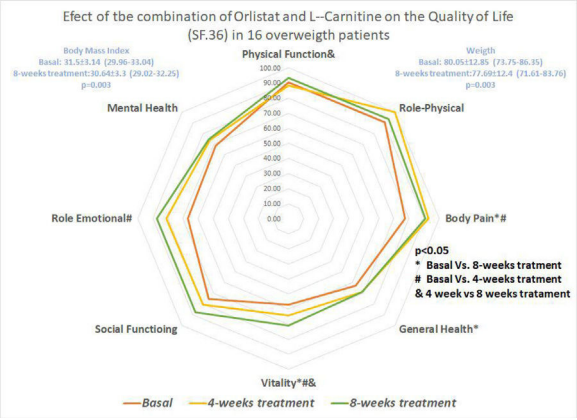
Introduction and Objectives: Orlistat is a drug widely used in overweight/obese patients, while the combination with l-carnitine could offer an improvement in these patients. To our knowledge, the effect of this combination on the quality of life of overweight patients has not been determined. We aimed to evaluate the effects on the quality of life of patients who took the combination of orlistat and l-carnitine at 4 and 8 weeks of treatment.

Materials and Methods: We evaluated the quality of life (Short Form-36) in 16 patients [41.81±8.26 (37.77-45.86) years, 81% women] undergoing pharmacotherapy of the combination of orlistat and l-carnitine at 4 and 8 weeks of treatment. Data express mean SD and 95%IC or percentages as correspond. We use paired Student t Test, two tails with an alpha=0.05.

Results: Figure. Patients lowered their weight in about 5%. Patients show improvement on body pain, general health, vitality and in both Mental [45.68±6.51 (42.49-48.86) vs. 49.88±3.21 (48.31-51.46), p=0.02] and Physical [59.4±8.92 (55.03-63.77) vs. 63.36±9.64 (58.63-68.08), p=0.01) summaries.

Conclusions: These results suggest a beneficial effect of the combination of Orlistat and l-carnitine on the treatment of overweight.



https://doi.org/10.1016/j.aohep.2023.101235

P- 49 DECOMPETATIONS CAUSING ADMISSION, READMISSION AND MORTALITY IN CIRRHOTIC PATIENTS ADMITTED AT EUGENIO ESPEJO SPECIALTY HOSPITAL. QUITO, ECUADOR

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Introduction and Objectives: Liver cirrhosis is the seventh cause of death in Ecuador and highest morbidity and mortality is a consequence of the decompensation of the disease. This study aimed to analyze the decompensations that cause admission, readmission and mortality in cirrhotic patients admitted to the gastroenterology unit at Eugenio Espejo Specialty Hospital from January 2020 to December 2021

Materials and Methods: a descriptive, observational and cross-sectional view study was conducted, with non-probabilistic random convenience sampling. We obtained the data from the medical records using the data collection instrument developed for this purpose and the data were analyzed using the statistical package IBM SPSS Statistics v28.

Results: 251 admissions for decompensated cirrhosis were analyzed, corresponding to 147 patients, of which 65.31% registered only one admission and 34.69% readmitted at least once during the study period. In the sample, 51.7% were women, and mean age was 62.08 (+/-12.8) years. The main etiology of cirrhosis was cryptogenic in females and enolic in males. The main cause for admission in the first hospitalization was upper gastrointestinal bleeding, reported in 37.4%, followed by encephalopathy and ascites (32.0% and 23.8%). The 30 and 90-days readmission rates were 41.3% and 32.7%, respectively, and the main cause for readmission was encephalopathy in 50% of patients, followed by upper gastrointestinal bleeding in 47.1% (mostly non-variceal). In-hospital mortality was 8.4% and the main associated complications were encephalopathy and acute kidney injury, both described in 47.6% of patients.

Conclusions: the main complication that led to hospital admission in the first hospitalization was variceal upper gastrointestinal bleeding and encephalopathy on readmission. The complications associated with higher mortality were encephalopathy, acute kidney injury and ACLF.

https://doi.org/10.1016/j.aohep.2023.101236

P- 50 VALIDATION OF S-ANT FOR THE DIAGNOSIS OF HEPATIC ENCEPHALOPATHY MINIMUM

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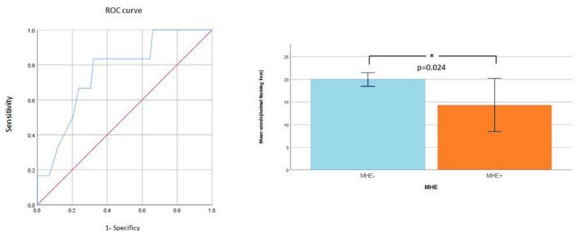
Introduction and Objectives: Hepatic encephalopathy (HE) is one of the most frequent complications of cirrhosis. Minimal hepatic encephalopathy (MHE) is the initial stage and is characterized by the fact that it has no clinical data; its diagnosis is made with neuropsychological tests, the MHE produces a deterioration in the quality of life of patients and an increased risk of accidents. Hence, it is relevant to diagnose. Performing neuropsychological tests requires prolonged time, so validating an MHE count test that is easy, reproducible, and in less time is recommended. The S-ANT test is performed by asking the patient to nominate 20 animals in one minute. In the reference score for the non-Mexican population, the test is negative; if it is less than 15 animals, it is positive and suggests MHE. This study aimed to assess the validity of the S-ANT scale as a screening test in patients with cirrhosis without overt HD.

Material and Methods: We present a prospective, descriptive, and analytical study of patients with cirrhosis of different etiology, without manifest HE to those who underwent S-ANT, PHES, and Flicker test. to validate the S-ANT test, the area under the curve of the receiver operator characteristic (AUROC) curve was calculated. Its Sensitivity (S) and specificity (SE) were determined, and MHE was considered when PHES and Flicker were positive for MHE. Statistical analysis The number of animals that patients with and without MHE were compared with the student's t-test for independent groups. The Sensitivity and specificity were calculated with the AUROC cut-off point for the S-ANT score for MHE+.

Results: The mean S-ANT for MHE- was 19.35±5.4 and for MHE+ 14.7±5.6, p=0.024 AUROC was significant .760 (.577- .942, 95%CI); p=0.037 with an S=83% and SE=77% cutoff= 17.5 words.

Conclusions: In the Mexican population, S-ANT reliably discriminates against patients with cirrhosis without overt HE with cognitive impairment, confirmed by PHES and Flicker test.



https://doi.org/10.1016/j.aohep.2023.101237

P-51 SERUM MICRORNA EXPRESSION ACCORDING TO THE PRESENCE OF LIVER DISEASE AND SARS-CoV-2 INFECTION

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Introduction and Objectives: Covid-19 presents as a multisystemic disease with described liver impact. MicroRNAs (miRNAs) are small non- coding RNAs which regulate different pathological processes, including hepatic conditions associated with SARS-CoV-2 infection. This study aimed to investigate serum miRNAs expression in patients with liver diseases according to the presence of SARS-CoV-2 infection.

Materials and Methods: Serum were obtained from 70 individuals from 4 groups: (i) hepatitis/Covid-19 (n=11); (ii) hepatitis-only (n=20); (iii) Covid- 19-only (n=19) and (iv) control subjects without both infections (n=20). MiRNAs were isolated from the samples using a commercial extraction kit. After reverse transcription, three miRNAs (mir122, mir143 and mir223) and exogenous control (mir39) were evaluated using relative quantification by real-time PCR. Statistical analysis was made using GraphPad Prism 9.5.1 software.

Results: There was a higher expression of mir122 in the liver disease group when compared to other groups. Statistical significance was founded in the lower expression of mir143 for hepatitis/covid group when compared to control (relative quantification average=0.55 vs. 2.10, p=0.0094) and covid-19-only (relative quantification average=0.55 vs. 3.19, p=0.0037). Mir223 showed a lower expression in groups composed of liver patients, with or without covid-19. Also, a statistical significance was observed for hepatitis-only group when compared to control (relative quantification average=1.1 vs. 7.52, p=0.0406) and covid-19-only (relative quantification average=1.1 vs. 12.94, p=0.0268). The same was suggested for hepatitis/covid-19 group when compared to control (relative quantification average=1.1 vs. 7.52, p=0.0009) and covid-19-only (relative quantification average=1.1 vs. 12.94, p=0.0006).

Conclusions: The different expression of these miRNAs has already been described in association with liver conditions. The description of the different expression of these markers will contribute to future studies that will evaluate associations with predispositions to clinical worsening, inflammation, or therapeutic failure in liver patients with covid-19.

https://doi.org/10.1016/j.aohep.2023.101238

P- 52 CORRELATION AMONG DIFFERENT METHODS TO ESTIMATE BODY AND LIVER FAT IN HEALTHY ADULTS

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Introduction an Objectives: An increase in body fat is a risk factor to develop fatty liver disease. Until now, few studies have related different methods to estimate body fat related to liver fat. We aimed to determinate the correlation among different methods to estimate body and liver fat in healthy adults.

Materials and Methods: In a cross- sectional study registered in ethics and research committees GAS3794 evaluating healthy adults; chronic illness, uncontrolled diabetes, hypertension or thyroid, bariatric surgery or pacemaker, were not included. The estimation of body fat (BF) was by 3 methods, two with bioelectric impedance of 19 frequencies (19F), 4 frequencies (4F) and the third by the Durnin-Womersley (DW) skinfold thickness formulae; also, were measured body mass index (BMI), waist circumference (WC) and visceral fat (VF). The liver fat was estimated by controlled attenuation parameter (CAP) using transitory elastography. Correlations were calculated with Pearson coefficient among body composition methods and CAP; each anthropometric isolated parameter was associated with hepatic steatosis grades by a logistic regression analysis using SPSS v21.0.

Results: In 231 participants, mean age was 41.8 years (SD 11.3), WC 91 cm (SD 12), BMI 27.8 kg/m2 (SD 4.6). 112 had some grade of steatosis (S3 n=72, S2 n=18). The correlation among 3 methods was on average r= 0.853 (p=0.000), and between CAP and BF was 0.290 (p= 0.000). BMI, WC, VF and suprailiac skinfold thickness showed correlations of r=0.570 (p=0.000), r=0.477 (p=0.000), r=0.393 (p= 0.000) y r= 0.471 (p=0.000) respectively. Regression analysis demonstrated that BMI (OR=1.32, p=0.000), WC > 80 women and > 90 cm men (OR=14.7, p=0.010), VF (OR=1.8, p=0.008) and suprailiac skinfold thickness (OR=1.14, p=0.000) showed association with steatosis.

Conclusions: Three methods were like to estimate body fat although they were not able to represent the liver fat; waist circumference was the best indicator related with steatosis

https://doi.org/10.1016/j.aohep.2023.101239

P- 53 NATURAL KILLER CELLS OF EARLY STAGES OF METABOLIC FATTY LIVER DISEASE PRESENT REDUCED CYTOTOXICITY AGAINST TUMOR CELLS. CASE- CONTROL ANALYSIS

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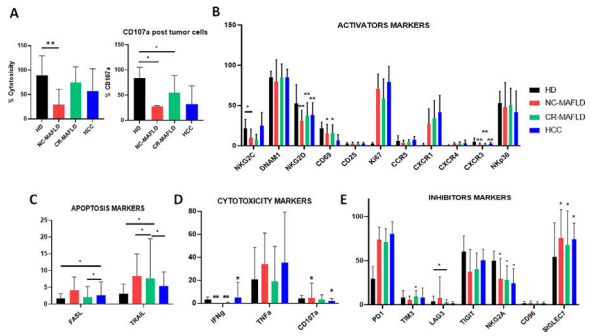
Introduction and Objectives: The liver is considered an important immunological site where natural killer (NK) cells mediate the immune response and tumoral immune surveillance. Understanding the involvement of NK cell function at different stages of metabolic fatty liver disease (MAFLD) is crucial to understand the oncogenic risk of MAFLD and hepatocellular carcinoma (HCC) carcinogenesis. This study aims to characterize the phenotype and function of peripheral NK cells in subjects with different stages of MAFLD.

Materials and Methods: We recruited 15 patients with non-cirrhotic MAFLD (NC-MAFLD), 18 with cirrhosis (CR-MAFLD), and 7 with HCC and compared them with 10 control subjects (HD). Peripheral blood NK cell analysis was performed using multiparametric flow cytometry to characterize NK cells in terms of maturation and function. LDH (lactate dehydrogenase) release assay was used to assess cytotoxicity against tumor cells in isolated NK cells. The results are expressed in percentages in Figure 1 with statistical analysis.

Results: NK cells from patients with NC-MAFLD have a significantly lower cytotoxic capacity than controls (HD=89.7% vs.

MAFLD=54.06%, p=0.0115).CD107a, a marker of NK cell degranulation, was significantly reduced in NC-MAFLD and CR-MAFLD after exposure to tumor cells. IFN- (cytotoxicity marker) is reduced in all three MAFLD groups compared to HD. Activation of NKG2D and CXCR3 receptors is significantly decreased in all three MAFLD groups compared to controls, while CD69 is decreased in NC-MAFLD and CR-MAFLD. In addition, the NKG2A (inhibitory receptor) is also decreased (Figure N°1, attached). Markers known to be involved in the NK cell apoptosis process, TRAIL, and FASL, are increased in the cirrhosis and HCC group.

Conclusions: These results suggest that early stages in patients with MASLD (particularly NC-MAFLD) have NK cell dysfunction with reduced cytotoxic capacity and activating receptors. These findings suggest NK cells exhaustion could be present in early stages of MASLD.



https://doi.org/10.1016/j.aohep.2023.101240

P-54 EVALUATION OF DAILY CLINICAL PRACTICE IN A CENTRAL AMERICAN COHORT WITH A DIAGNOSIS OF AUTOIMMUNE LIVER DISEASE: THEORY VS. PRACTICE

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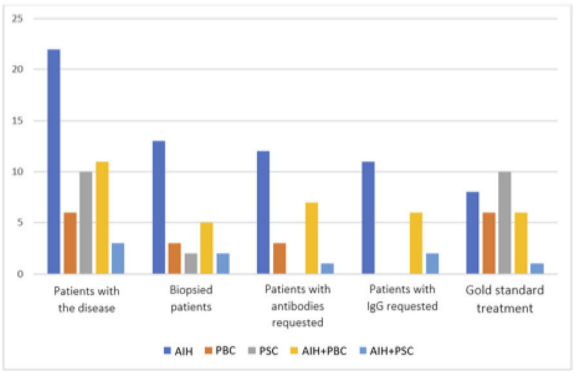
Introduction and Objectives: Autoimmune liver diseases (AILD) are entities of uncertain cause that affect all ages, genders, and ethnicities. Timely treatment drastically modifies the prognosis, but epidemiological heterogeneity represents a challenge. Adherence to international guidelines for its management is especially important for liver transplantation programs. This study aims to establish the epidemiological profile of a Central American cohort and analyze adherence to diagnostic and therapeutic guidelines in the specialized clinical practice of a Liver Transplant center.

Materials and Methods: Observational, retrospective study of a cohort diagnosed as AILD based on the digital records of a specialized hospital: autoimmune hepatitis (AIH), primary biliary cholangitis (PBC), primary sclerosing cholangitis (PSC) and variant syndromes.

Results: From 1998-2021, 52 patients were identified: 42% HAI, 19% CEP, 12% CBP, 21% HAI+CBP, 6% HAI+CEP. Mean age: 59 years (SD +/-12.2), 81% women. The main comorbidities were autoimmune diseases 52% (Hashimoto's thyroiditis 19%, Sjögren's 10% and rheumatoid arthritis 10%). Liver biopsy was performed in 25 patients (48%) (F3+F4: 16%). The serological study with antibodies and IgGs was requested in 60% of those classified as HAI, the simplified score for HAI was calculated in 55% (9% probable, 0% definitive) and one of 11 (9%) patients classified as HAI+CBP fulfilled the Paris criteria. Thirty-six percent of patients classified as HAI were treated according to current guidelines (37% complete response and 31% partial response) and all PBC and PSC were treated with ursodeoxycholic acid. Female sex and histological grade of fibrosis were significantly associated with better response to HAI treatment (p=0.003 and p=0.044, respectively).

Conclusions: A high percentage of patients approached as AILD in daily clinical practice does not conform to established guidelines and is based on individualized medical judgment. The application of protocolized guidelines for the management of AILD minimizes the possibility of etiologic overdiagnosis.

FIGURE 1: Diagnostic and therapeutic approach to patients with autoimmune liver diseases



https://doi.org/10.1016/j.aohep.2023.101241

P- 55 ACUTE LIVER FAILURE IN PERU: EPIDEMIOLOGY AND PROBLEMATIC OF SUPPORT AND MANAGEMENT

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Introduction and Objectives: Acute liver failure (ALF) is a severe clinical entity that requires a rapid diagnosis and for its proper management requires adequate intensive care support and the possibility of liver transplantation. This study aimed to show clinical epidemiological characteristics of ALF and the problematics of its management in Peru.

Materials and Methods: Google forms electronic survey answered (February-March 2023) by specialists who work in hospitals that care for patients with ALF throughout Peru with the sponsorship of 3 Peruvian scientific societies: intensive care (SOPEMI), Transplant (APTOT) and Hepatology (APEH).

Results: Representatives of 33 public and private hospital centers from the entire health services system responded the survey: Adults: 27/33 (81.8%) and Pediatrics: 6/33 (18.2%). ALF criteria diagnosis: severe acute liver injury with encephalopathy and impaired synthetic function (INR >=1.5) in a patient with preexisting liver disease and with an illness < 26 weeks duration. Geographical regions: Lima (12 million inhabitants: 66.7%) and 7 other regions of Peru: Arequipa, La Libertad, Junin, Tacna, Cajamarca, Huanuco & Puno (9 million inhabitants: 33.3%). Specialties: ICU: 36.4%, GI/hepatology: 30.3%, emergency: 15.2%, Pediatric CU: 9.1%. Male/female ratio 2-3/1: 57.6%. ICU stay: <1 week: 12.1%, <4 weeks: 57.6%, 4-8 weeks: 21.2%, > 8 weeks: 10.1%. ALF Diagnostic Criteria severity: MELD: 54.5%. Kings: 24.2%. Clichy: 3%. Possibility of being transferred to a transplant center: 51.5%. ALF Mortality: Multiorgan failure: 90.9%. ICU with multiorgan support: 57.6%.

Conclusions: ALF in Peru is a serious entity that especially affects the adult population, with high mortality, limited access and limited possibility of liver transplantation. It is necessary to have adequate resources from the government and scientific societies (SOPEMI, APTOT and APEH) to adequately attend this entity which requires support from human resources and adequate care from multidisciplinary health team.

Table. Etiology, age, Cases/y, Classification, ICU admission time and evolution in ALF

Etiology	No	%	Age group	No	%	ALF Cases /y	No	%
Unknown	20	60.6	> 60 y	4	12.1	> 10	4	12.1
HAV	5	15.2	35-60 y	16	48.5	5-10	8	24.2
HILI	4	12.1	18-34 y	7	21.1	3-5	10	30.3
DILI	4	12.1	< 18 y	6	18.3	< 3	10	36.4
TOTAL	33	100	TOTAL	33	100	TOTAL	33	100
ALF Classification	No	%	ICU admission time (days)	No	%	ALF Evolution	No	%
Hiperacute	6	18.2	< 7 d	21	63.6	Spontaneus recovery	8	24.3
Acute	19	84.8	7-14 d	5	15.2	Death	19	63.6
Subacute	8	24.2	> 14 d	7	78.8	Liver Tx	4	12.1
TOTAL	33	100	TOTAL	33	100	TOTAL	33	100

https://doi.org/10.1016/j.aohep.2023.101242

P- 56 TUBERCULOSIS IN LIVER TRANSPLANT RECIPIENTS: EXPERIENCE OF A SINGLE CENTER

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Introduction and Objectives: In Peru the tuberculosis (TB) is an endemic infectious disease. This disease is a serious opportunistic infection in transplant recipients (LTRs) and has 20 to 74-fold increase in a chance of developing compared to the general population The prevalence of TB in (LTRs) is variable between regions. This study aims to describe the rate, clinics characteristics and mortality of TB in LTRs from a high-prevalence area.

Materials and Methods: We conducted a retrospective review of liver transplant recipients with tuberculosis diagnoses at Guillermo Almenara Hospital between Mach 2001 and March 2022.

Results: A total of 294 patients underwent LT during this period. 7 (2.3 %) adult patients were diagnosed with active TB. Mean age was 49 (32- 64) years; 5 (70 %) were males. Time interval from LT to TB diagnosis was 57 months (2-136) and 42 % had early tuberculosis (< 12 m). Three patients had disseminated TB and Four pulmonary involvement. 72 % received individualized treatment to avoid hepatotoxicity related to treatment, 28.5% had DILI with standard treatment. We found 28.5 % mortality no related to TB infections.

Conclusions: We observed a low rate of TB in LTRs (2.3%) from a high prevalence region. Most of our patients received individualized treatment.

https://doi.org/10.1016/j.aohep.2023.101243

P-57 CHARACTERIZATION OF HEPATOCELLULAR CARCINOMA AND ITS RELATIONSHIP WITH ALPHA-FETOPROTEIN LEVELS

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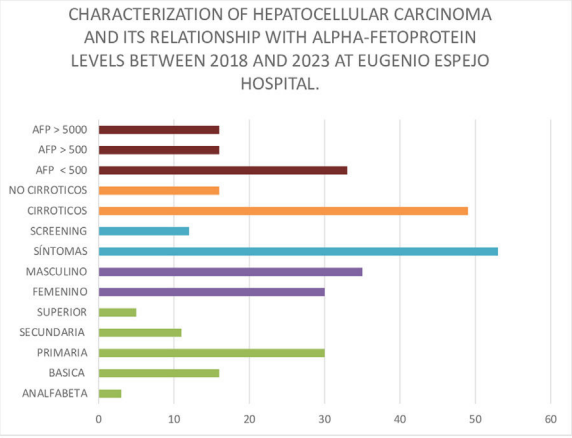
Introduction and Objectives: Hepatocellular carcinoma (HCC) is the most common cancer of the liver, with differences in its incidence due to variance in risk factors and geographic locations. In Ecuador the incidence is 3.3/100000 with a mortality of 6.45/100000. Alpha-fetoprotein (AFP) is a biomarker used as a tumor marker for diagnosis, monitoring therapy and surveillance in HCC. This study aims to know the clinical and demographic characteristics of HCC and its relationship with AFP levels.

Materials and Methods: An observational descriptive analyze was used between 2018 and 2023, with a total of 65 patients with HCC, using percentages and frequency for qualitative data and central variance analyses for quantitative data.

Results: from 65 patients, 35 (54%) were men and 30 (46%) women. The mean age of diagnostic was 67.7 years old. 46(71%)

people was found to have a low level of education and only 5(8%) had competent education. 53(82%) of patients had some clinical finding at the time of diagnostic while 12 (18%) did not and were diagnostic on surveillance. Cirrhosis was found to be the most common risk factor with 49(75%) presenting at the diagnostic compared with only 16 (25%) that were cirrhosis free. Levels of AFP at the diagnostic were less than 500 UI/mL in 33 (51%) patients over 500 UI/mL in 16 (25%) patients and over 5000 UI/mL in 16 patients. We could notice that higher values were found in cirrhotic patients.

Conclusions: Lower educational level, clinical findings and cirrhosis were associated with higher incidence of HCC. We could not find any relation between gender and HCC. Quantitative elevation of AFP is higher in cirrhotic patients than in non-cirrhotic patients. Our series concludes that the surveillance of HCC in cirrhotic patients is with ultrasound and AFP levels.



https://doi.org/10.1016/j.aohep.2023.101244

P- 58 CLINICAL OUTCOMES OF PATIENTS WITH GRAFT REJECTION FOLLOWING TRANSPLANTATION FOR AUTOIMMUNE LIVER DISEASE AT A LIVER TRANSPLANT CENTER IN COLOMBIA

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Introduction and Objectives: Liver transplantation is the best treatment option for patients with cirrhosis and advanced autoimmune liver disease. Approximately 15-25% of transplanted patients experience acute graft rejection with standard immunosuppression regimens, and, less frequently, chronic rejection. There is limited evidence in Colombia regarding the incidence of these events and their impact on graft and patient survival. This study aims to characterize the rejection rates in patients transplanted for autoimmune liver disease at a Colombian liver transplant center.

Materials and Methods: Descriptive retrospective longitudinal study of a cohort of patients with autoimmune liver disease who underwent liver transplantation from November 2005 to December 2022.

Results: A total of 163 patients were transplanted for autoimmune hepatitis (AIH), primary biliary cholangitis (PBC), primary sclerosing cholangitis (PSC), and overlap syndromes. The rejection rate in this population within the first year was 17.8% (n=29), between the first and fifth year was 22% (n=36), and between the fifth and tenth year was 6.3% (n=10). Acute rejections accounted for 90.7% of the cases. Approximately 80% of the patients were managed with calcineurin inhibitors plus mycophenolate, with or without corticosteroids, and 92.7% had immunosuppression levels within target range. The overall mortality rate was 14.6% (n=24): 7.36%(n=12) in AIH, 3.06% (n=5) in PBC, 3.6% (n=6) in overlap syndromes, and 0.6% (n=1) in PSC.

Conclusions: In this population, the acute rejection rates at one year, five years, and ten years after liver transplant were similar to those reported in the literature. However, patients transplanted for autoimmune liver disease have a higher rejection rate than other cirrhosis etiologies. These findings should prompt the evaluation of adjustments in immunosuppression protocols and determine other factors associated with rejection, such as the relationship between histocompatibility and rejection risk.

https://doi.org/10.1016/j.aohep.2023.101245

P- 59 ROLE OF MARESINA-1 ON THE KIDNEY AND LIVER MORPHOLOGY ON A MURINE MODEL OF TYPE I DIABETES MELLITUS INDUCED WITH STREPTOZOTOCIN

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Introduction and Objectives: Diabetes mellitus (DM) is a chronic metabolic disease characterized by elevated blood glucose levels. DM1 manifests itself through hyperglycemia, the main factor inducing numerous life-threatening complications and comorbidities. DM has high morbidity and mortality associated with cardiovascular diseases, nephropathy and dyslipidemias, which are correlated with the deterioration of liver function. Maresin-1 (MaR1), a specialized pro-resolving lipid mediators has recently been described. MaR1 has a positive role in various inflammation-related pathologies particularly, it has favorable effect on chronic liver disease. This study aims to evaluate the effect of MaR1 administration on liver and kidney tissues in a murine model of DM1. Our hypothesis is that treatment produces an improvement in liver and kidney morphology.

Materials and Methods: male C57BL/6 mice where induced DM1 by Spreptozotocin injection (50mg/Kg) and MaR1 (4ng/g) diary for 4 weeks. Liver and Kidneys were processed for H&E and Masson's Trichrome stain and morphological analyzed. An immunohistochemical study was also carried out with the use of antibodies to fibronectin and -SMA. The data was evaluated by Image J and Prism 9 software's.

Results: Both in liver and kidney, the MaR1 animal group recovers the cito-architecture and decreased the score of fibrosis in comparison with DM group, resembling the control group. In liver tissue a decrease of lipids deposit was observed in the MaR1, concomitant with the architecture improvement.

Conclusions: Mar1 at 4 ng/g generates a positive response in the liver and kidney morphology, depleting the tissue damage observed in a DM1 murine model. Deeper analysis should carry on for to enlarge this results and assay Mar1 as a potential therapeutic activity against one of the most prevalent diseases in the world, the DM.

https://doi.org/10.1016/j.aohep.2023.101246

P-60 DIAGNOSTIC PERFORMANCE OF FIBROSCAN FOR LIVER DISEASE IN BOGOTA, COLOMBIA

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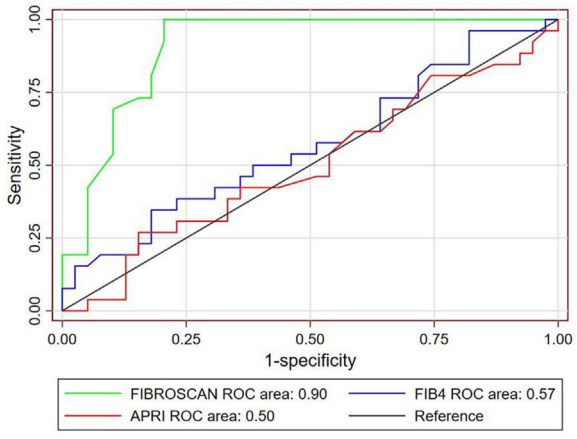
Introduction and Objectives: In the diagnostic process of liver diseases the clinical history and hepatic biochemical profile are fundamental. Liver biopsy is the gold standard for diagnosis, evaluation of activity, fibrosis status or therapeutic response. It is an invasive procedure with risk of complications. With respect to fibrosis staging, a key point in decision making in follow-up and treatment, non-invasive tests have been developed that are easily accessible and without resorting to biopsy. The calculation of the FIB-4 and APRI indices is useful in general practice, but not sufficient to determine the degree of fibrosis in early and intermediate stages. Liver fibrosis increases stiffness and decreases tissue elasticity and can be assessed by Elastography, this technique is sensitive to differentiate patients without fibrosis from those with advanced fibrosis, in a fast and well tolerated way. This study aims to describe the diagnostic performance for detecting liver fibrosis of FibroScan compared with APRI and FIB4 indices versus liver biopsy in patients with liver disease in Bogota.

Materials and Methods: Retrospective cohort study, cross-sectional, consecutive sampling, performed in the period 2019-2022, the APRI, FIB4 and Fibroscan indices were compared with the biopsy result, the diagnostic accuracy measures for APRI, FIB4 and FibroScan were described and an area under the curve analysis (ACOR) was performed.

Results: Biopsy was positive for fibrosis in 40%, FibroScan showed excellent performance for detecting fibrosis, with an ACOR of 0.90 (CI: 0.83 - 0.97), APRI indices of 0.52 (CI: 0.35- 0.68) and FIB4 of 0.52 (CI:0.37 - 0.68).

Conclusions: FibroScan is a useful tool for the diagnosis and follow-up of chronic liver disease, it should be used in combination with other diagnostic tests and clinical evaluation. FibroScan showed excellent performance in discriminating patients with liver fibrosis compared to APRI and FIB4 indices and is better at detecting advanced stages.



https://doi.org/10.1016/j.aohep.2023.101247

P- 61 DRUG-INDUCED LIVER INJURY: REPORTING CHALLENGES AND ENZYMATIC CHANGES IN PATIENTS USING ANTIBIOTICS – RETROSPECTIVE STUDY

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Introduction and Objectives: Drug-induced liver injury (DILI) - an underreported adverse event (AE) - is classified as hepatocellular, cholestatic or mixed, through the alanine-aminotransferase (ALT) and alkaline phosphatase ratio, when ALT > 2x the upper limit of normal (LSN). Polypharmacy and conditions can change these data. In hospitalized patients, antibiotics (ATB) are one of the most prescribed drugs, can cause DILI. We aimed to evaluate the profile and frequency of ALT in patients using ATB amoxicillin-clavulanate (AMX_CLAV), cefepime (CEF) and meropenem (MPN), verifying possibility and type of DILI, notifications in the Hospital Pharmacovigilance System (SFH) and what limitations lead to underreporting.

Materials and Methods: partial retrospective analysis of medical records of patients admitted to University Hospital, with ALT>2xLSN, using the referred ATB; AEs collection from the hospital and Anvisa databases, assessing causes of underreporting. Statistical significance was 5% and analyzes were performed using SPSS® program.

Results: In 2018, 739 hospitalized patients had ALT>2xLSN. Of these, 45% used ATB [AMX_CLAV (2.3%); CEF (27.2%); MPN (15.6)]. Death in patients with ALT>2xLSN was 40.1%, majority CID A41.9 (27.3%). K72.0 [Chronic Liver Failure] scored 3.5%. 24.9%(n=184) had ALT>5xULN and of these, death in 53.3%(n=98)(p<0.001). Use of CEF and MPN was significantly higher in deaths compared to non-deaths (39.9% x 18.7%, p<0.001/27.7% x 7.4%, p<0.001, respectively CEF and NMP). Concurrently, SFH investigated 139 notifications, 6.5% ATB AEs (n=9). Of the cases, 4 reported hepatotoxicity, ALT being reported for MPN and AMX_CLAV. In ALT>5xLSN patients, there were 3 cholestatic (3.8%), 18 mixed (60.0%) and 3 hepatocellular (13%)(p<0.001).

Conclusions: Hepatocellular injury in hospitalized patients with ALT>5xULN using ATB is more severe, although the mixed pattern is more frequent. There is no active pharmacovigilance in DILI considering ALT; spontaneous reports are underreported due to the complexity of the DILI diagnosis, lack of specific tests and data in the medical records.

https://doi.org/10.1016/j.aohep.2023.101248

P- 62 RELAPSE OF AUTOIMMUNITY IN PATIENTS WITH LIVER TRANSPLANTATION FOR AUTOIMMUNE HEPATOPATHY AT A COLOMBIAN HEPATOLOGY CENTER

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Introduction and Objectives: Autoimmune hepatopathies encompass a spectrum of diseases, including autoimmune hepatitis (AIH), primary biliary cholangitis (PBC), primary sclerosing cholangitis (PSC), and overlap syndromes, which can progress to cirrhosis.

Liver transplantation is an excellent management option for patients with advanced chronic liver disease. In our setting, the clinical outcome in terms of relapse rate for patients undergoing liver transplantation due to autoimmune hepatopathies is unknown. This study aims to characterize the relapse rates in patients transplanted for autoimmune hepatopathy at a Colombian liver transplant center.

Materials and Methods: A longitudinal retrospective descriptive study of a cohort of patients with autoimmune hepatopathy who underwent liver transplantation from November 2005 to December 2022.

Results: A total of 163 patients were transplanted for autoimmune pathology. The relapse rate within the first year was 2.6% (n=2) for AIH, 3.7% (n=1) for PBC, 9.2% (n=5) in overlap syndrome, and 16% (n=1) in PSC. Between the first and fifth year post-transplantation, the relapse rate was 13.1% (n=10) in AIH, 14.8% (n=4) in PBC, 29.6% (n=16) in overlap syndrome, and 0% in PSC. Between the fifth and tenth year, the relapse rate was 11.8% (n=9) in AIH, 22.2% (n=6) in PBC, 9.2% (n=5) in overlap syndrome, and 0% for PSC. The cumulative relapse rate at 10 years was 27.6% for AIH, 40% for PBC, and 16% for PSC.

Conclusions: In this population, the one-year, five-year, and ten-year relapse rates were similar to those reported in the literature at other liver transplant centers. These findings warrant further studies in the population with CBP to determine if there is any genetic susceptibility that predisposes to a higher relapse rate compared to other autoimmune liver diseases.

https://doi.org/10.1016/j.aohep.2023.101249

P- 63 UTILITY OF TRANSJUGULAR INTRAHEPATIC PORTOSYSTEMIC SHUNT IN TREATING COMPLICATIONS OF PORTAL HYPERTENSION: EXPERIENCE IN UNIT OF LIVER TRANSPLANTATION IN URUGUAY

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Introduction and Objectives: Trans jugular intrahepatic portosystemic shunt (TIPS) is the major therapeutic alternative for treating portal hypertension-related complications (PHT) that do not respond to medical treatment. It is commonly used as a bridge therapy to liver transplantation (LT). TIPS improves quality of life, overall survival, and LT-free survival while reducing the incidence of decompensation. Adequate patient selection is crucial for rightful indication. This study aimed to present the utility of TIPS on the complications of refractory PHT that dont respond to standard of care medical treatment.

Materials and Methods: From July 2017 to December 2022, all consecutive patients with PHT admitted to receiving TIPS creation were retrospectively analyzed. The objective was to decrease the portal pressure gradient below 12 mmHg or >50% of its baseline. Follow-up was performed using Doppler ultrasound to monitor permeability and function.

Results: 264 patients were evaluated for LT, of whom 15 had complications of refractory PHT that did not respond to medical treatment (Table1). Nine were females and six males. Mean age of 47 years old. Eight (53%) had refractory ascites, and seven (47%) had recurrent variceal bleeding. The median follow-up period was 38 (1-66) months. Success was assessed based on hemodynamic, clinical, and imaging parameters. All patients had favorable outcomes, with transient hepatic encephalopathy observed in 3 cases and hemolytic anemia in one case. Global dysfunction occurred in 20% of patients at one year but was corrected through stent angioplasty. Four patients underwent transplantation, and eight were removed from list due to clinical improvement. Two patients died, and one is currently on the waiting list. Overall survival rates were 93% at one year and 87% at three years.

Conclusions: TIPS is a highly useful therapeutic tool which is applied in our center. Proper patient selection allows for similar overall and transplant- free survival rates as reported internationally.

Case	Age	Gender	MELD Na	Child-Pugh	Indication	Follow-up time (months)
1	61	F	22	B8	RVB	66
2	47	F	10	B9	RA	66
3	20	F	10	B7	RVB	57
4	64	F	9	A6	RVB	50
5	37	F	14	NA	RA	46
6	14	M	9	NA	RVB	46
7	50	F	17	C10	RA	40
8	67	F	14	C10	RA	38
9	62	M	22	NA	RVB	38
10	68	M	16	B9	RA	21
11	56	M	NA	NA	RVB	21
12	55	F	9	B8	RA	21
13	16	M	11	A6	RVB	11
14	26	F	NA	NA	RA	1
15	63	M	11	B8	RA	3

Table 1 - Demographic and clinical data of the patients.

F: Female, M: Male, NA: Not applicable, RVB: recurrent variceal bleeding, RA: refractory ascites.

https://doi.org/10.1016/j.aohep.2023.101250

O-1 SEROPREVALENCE AND MOTHER-TO-CHILD TRANSMISSION OF HEPATITIS B AND C VIRUSES AMONG PREGNANT WOMEN IN A MATERNAL AND CHILDREN HOSPITAL FROM THE PROVINCE OF BUENOS AIRES

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Introduction and Objectives: The WHO proposed to eliminate viral hepatitis by the year 2030. To achieve this ambitious goal, we must evaluate the seroprevalence of these infections in different populations. This study aimed to estimate the seroprevalence of hepatitis B (HBV) and C (HCV) among pregnant women and mother-to-child transmission in a maternal hospital.

Materials and Methods: We conducted an observational, prospective and consecutive study including pregnant women from San Isidro Maternal and Children Hospital whose births occurred between 05/01/2019 and 04/30/2021. In all patients HBsAg and anti-HCV were assessed during the 1st and 3rd trimester of pregnancy together with HIV. In the case of presenting HBsAg+, anti-HBcIgG was performed on the same sample followed by HBV-DNA PCR. In the case of presenting

anti-HCV+, a confirmatory test was performed with PCR HCV-RNA. Neonates of HBsAg+ or HCV+ were follow-up for 3 years.

Results: 2762 births were included during the period under study. Five (0.18%) HBsAg+ pregnant women were identified, median age was 25 years (range 17-36), of which only 1 had anti-HBcIgG+. Given the suspicion of chronic HBV and the delay in obtaining the HBV-DNA results, treatment with tenofovir was started. In successive controls, no chronic HBV infection was diagnosed in neonates. Anti-HCV + was detected in 8 (0.29%) patients, with a median age of 29 years (range 19-38 years), of which only one patient presented detectable HCV-RNA, genotype 4. This patient had a diagnosis of HCV chronic prior to pregnancy and her son presented anti-HCV- at age 3. Finally, one patient with HBsAg+ and another with anti-HCV+, but negative viral loads presented HIV+.

Conclusions: The gestation period is an excellent opportunity to carry out health checks. During the studied period, the seroprevalence of HBsAg+ and anti-HCV+ was very low. These types of interventions are essential to achieve the objectives set by the WHO.

https://doi.org/10.1016/j.aohep.2023.101251

O-2 EVALUATION OF RISK FACTORS AND PROGNOSIS OF HEPATOCELLULAR CARCINOMA RECURRENCE AFTER LIVER TRANSPLANTATION

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Introduction and Objectives: Liver transplantation (LT) is the preferred treatment for early-stage HCC. Despite restrictive criteria (Milan), recurrence is high and negatively impacts on LT survival. This study aimed to evaluate risk factors and prognosis of HCC recurrence after LT.

Materials and Methods: Retrospective Brazilian university hospital HCC-transplanted cohort (2002 -2021). Patients transplanted for other causes, with a follow-up < 1 year or with incidental HCC at explant were excluded. Primary outcome was recurrence of HCC. Secondary outcomes were survival and time elapsed until HCC diagnosis. Tumor burden was the sum diameter of all nodules at explant. Data extraction was conducted with Excel, and statistical analysis was performed with SPSS.

Results: 186 patients were included (males 123 [66.1%], median age 56 years-old), 153 (82.3%) Milan-in. Locoregional waiting-list therapy was trans arterial chemoembolization (TACE), percutaneous ethanol injection (PEI) or TACE + PEI in 63 (34.2%), 58 (31.5%) and 42 (22.8%) individuals, respectively. Downstaging was achieved in 31 patients (17.8%). Explant analysis with microvascular invasion and Milan-out was detected in 31 (16.9%) and 33 (18%) individuals, respectively. HCC recurrence occurred in 22/183 patients (12%), associated with pre-LT alfa-fetoprotein (AFP) (1.881 [IQR 109-4.510] x 6 [IQR 3-39], p=0.02), Milan-out at explant (59.1% x 11.3%, p<0.0001), microvascular invasion (45.5% x 13.9%, p<0.001), and tumor burden at explant (3.9 cm [IQR 3.2-7] x 3 cm [IQR 2-4], p=0.02). Downstaging had no impact on HCC reappearance. Median recurrence time was 22 months (IQR 10.5-42.5); most frequent sites were lungs (18.2%), liver (13.6%) or multiple (36.4%). Median survival after HCC recurrence was 17 months (IQR 6.5-36).

Conclusions: Tumor burden, Milan-out at explant, microvascular invasion and higher pre-LT AFP levels had a negative impact on HCC recurrence. This can identify patients with higher risk of recurrence by planning screening protocols and making early diagnoses to guide effective treatment.

https://doi.org/10.1016/j.aohep.2023.101252

O-3 DEVELOPMENT OF LENTIVIRAL VECTORS FOR INHIBITION OF HEPATITIS B VIRUS VIA SMALL INTERFERING RNA

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Introduction and Objectives: It is estimated that chronic hepatitis B virus (HBV) infection accounts for one million deaths/year due to cirrhosis and liver cancer. Currently, several drugs are used in the treatment of HBV; however, a complete cure is still controversial. The major challenge is the persistence of viral covalently closed circular DNA (cccDNA), as well as the ability of HBV to integrate into the host genome, which enables the infection's reactivation. Interfering RNA (RNAi) is a post-transcriptional mechanism of gene silencing and is a promising alternative for the treatment of chronic hepatitis B. We aimed to construct effective RNAi lentiviral vector to silencing HBV proteins (HBsAg, HBcAg, HBeAg) and pre-genomic RNA (pgRNA), via RNAi.

Materials and Methods: The silencing vector candidates targets overlapped Open Reading Frames (ORFs), allowing different viral proteins and the pgRNA to be silenced with a single RNAi. The efficiency of silencing by lentiviral vectors candidates used individually or in combination, have been assessed by quantification of HBV proteins by eletroquimioluminescence and quantification of HBV DNA during the post-transfection period by quantitative PCR.

Results: Three silencing vectors candidates were constructed and tested in silico to prevent off-target effects. Stability and secondary structures have also been tested. Huh7 cells were transfected with 1ug of purified HBV genome circular monomers (genotype A1) and 3 days later, infected with the first lentiviral candidate (siHBV-1), targeting S/Pol genes of HBV (108 TU/mL). From the third day post-infection, HBsAg became undetectable on cells infected by the lentiviral vectors, while untreated controls maintained viral protein expression (p<0.002). HBV DNA were also undetectable by PCR.

Conclusions: siHBV-1was able to silence HBV in vitro. This approach allows long- term, sustained knockdown of HBV replication and gene expression, which can effectively promote HBV clearance in chronic carriers.

https://doi.org/10.1016/j.aohep.2023.101253

O-4 MBOAT7 RS641738 IS ASSOCIATED WITH PROGRESSION TO CIRRHOSIS IN NON-ALCOHOLIC FATTY LIVER DISEASE IN LATIN AMERICA

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Introduction and Objectives: Latin Americans experience some of the highest global rates of non-alcoholic fatty liver disease (NAFLD) and the prevalence of cirrhosis is increasing in this population. The rs641738 C>T single nucleotide polymorphism (SNP) of MBOAT7 has been associated with NAFLD development and cirrhosis in Europeans with NAFLD. However, the impact of this SNP in Latin Americans is unclear. We aimed to evaluate a cohort of Latin Americans with NAFLD to determine if MBOAT7 effects the risk of cirrhosis in this understudied population.

Materials and Methods: Individuals with NAFLD from 6 South American countries (Argentina, Ecuador, Brazil, Chile, Peru and Colombia) were prospectively recruited via the ESCALON network. Genotyping was performed with the TaqMan-genotyping assay. Genotype frequencies for MBOAT7 were compared using chi-square. Those with hepatocellular carcinoma were excluded.

Results: A total of 278 patients were included, 189 with cirrhosis and 89 without cirrhosis. 55% of the cirrhosis cohort were females compared to 61% of the cohort without cirrhosis (p=0.337). The median ages of those with and without cirrhosis were 64 (IQR 59-70) and 60 years (IQR 52-65), respectively. The MBOAT7 TT genotype was present in 36/189 (19%) of subjects with cirrhosis and 7/89 (8%) of subjects without cirrhosis (OR=2.76, 95% CI: 1.17-6.47, p=0.016). We evaluated the minor allele frequency (MAF) of MBOAT7 in our cirrhosis cohort compared to the Latin American population in the gnomAD database, a genome database with 17,720 sequences belonging to Latin Americans. MAF was elevated in cirrhotics compared to the general Latin American population (43% vs. 33% respectively, OR=1.54, 95% CI: 1.25-1.89, p<0.001).

Conclusions: The rs641738 C>T SNP of MBOAT7 was associated with cirrhosis in a cohort of Latin Americans with NAFLD. Identification of genetic risk factors for liver disease may lead to improved risk stratification and interventional strategies in this population with an increasing burden of liver disease.

https://doi.org/10.1016/j.aohep.2023.101254

O- 5 HCC RISK SCORE PRE AND POST SUSTAINED VIROLOGICAL RESPONSE IN PATIENTS TREATED FOR CHRONIC HEPATITIS C

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Introduction and Objectives: Introduction: Patients with hepatitis C virus (HCV) with advanced fibrosis (F3/4) still presented a significant risk of developing hepatocellular carcinoma (HCC). There are models for HCC risk prediction, such as the HCC risk score developed by Iannou *et al* 2018. This study aimed to evaluate the prevalence and risk factors for hepatocellular carcinoma development in previously treated chronic HCV patients in an outpatient hepatology clinic at Hospital das Clinicas of University of São Paulo School of Medicine, Brazil.

Materials and Methods: This is a retrospective, observational and descriptive study in a series of 267 HCV patients. Review of patients' medical records, applying HCC risk score immediately before and 6 months after SVR, excluding cases with insufficient data and HCC before treatment of HCV. Data collection is still in progress and final results will be available at presentation.

Results: The total sample of this study consists of 267 patients, of whom, 127 (47.6%) had F4 degree fibrosis. Overall, 17 patients developed HCC after a median follow up period of 3 years (6.4%). The mean of HCC risk score at 3 years calculated in pre treatment was 9.64% and post treatment was 4.32% (p=0.002). An accuracy of this score was slightly better in the pre treatment (AUROC=0.72) versus post treatment (AUROC=0.69) (Figure 1).

Conclusions: HCC risk score post treatment declines more than 50% compared to pre treatment of HCV, as expected in in patients with HCV cure.

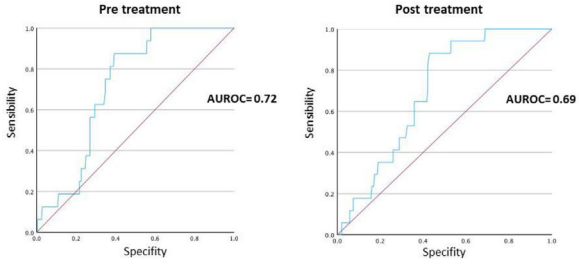

Figure 1. Pre- and post-treatment HCV HCC risk score accuracy

https://doi.org/10.1016/j.aohep.2023.101255

O-6 EXPLORING THE IMPACT OF INFECTIONS IN PATIENTS WITH ALCOHOL- ASSOCIATED HEPATITIS IN LATIN AMERICA

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Introduction and Methods: Severe alcohol-associated hepatitis (AH) is frequently associated with higher infection risk. This study aimed to assess the impact of infections in patients with AH in a multinational cohort in Latin America.

Materials and Methods: Multicenter prospective cohort study including patients with AH (2015-2022). We recorded clinical information, and the impact of infections was assessed using competing-risk models.

Results: We included 511 patients from 24 centers in 8 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, and Peru). The mean age was 50.1±11.9 years, 426 (83.9%) were men, 264 (58.2%) had a previous diagnosis of cirrhosis, and the median MELD at diagnosis was 24.6 [19.6–30.6] points. Out of the total, 25.9% died, and only 3.7% underwent liver transplantation during follow-up. Also, 44.5% of patients developed an infection. Of them, 50.9% presented with infection at admission, 30.8% developed an infection during hospitalization, and 18.3% presented an infection in both situations. The most common localizations at admission were pulmonary (32.4%), urinary tract (33.1%), spontaneous bacterial peritonitis (15.9%), and cutaneous (9.7%). The main localizations during hospitalization were pulmonary (34.4%), urinary tract (25.8%), spontaneous bacterial peritonitis (14.0%), and bacteremia (8.6%%). The incidence of multidrug-resistant (MDR) organisms was 11.2% at admission and 10.3% during hospitalization, while the incidence of extensively drug-resistant (XDR) organisms was 1.4% and 4.7%, respectively. The presence of infection was associated with higher mortality (sub-distribution hazard ratio [sHR] 1.92, 95%CI:1.56–2.37; p<0.001). In a competing-risk model adjusted by age, sex, MELD, and ACLF grade, the infections were independently associated with mortality (sHR 1.33, 95%CI:1.02–1.75; p=0.037).

Conclusions: Infections during an AH episode are frequent and independently associated with mortality in Latin America. However, the incidence of multidrug-resistant organisms was lower than in other regions. Efforts should be made to prevent, diagnose, and adequately treat infections in AH.

https://doi.org/10.1016/j.aohep.2023.101256

O-7 CURRENT PRACTICE OF LIVER TRANSPLANTATION IN LATIN AMERICAN COUNTRIES: AN ALEH INTEREST GROUP SURVEY 2023

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Introduction and Objectives: Little is known about current practice of liver transplantation (LT) in Latin American countries (LATAM). This study aimed to describe LT activity, immunosuppression protocols and policies regarding prophylaxis of cytomegalovirus (CMV) infection and hepatitis B virus (HBV) recurrence in different active LATAM centers.

Materials and Methods: A web-based survey with 20 questions regarding LT practice was sent to all members of ALEH LT SIG in December 2022.

Results: 22 centers performing 35 [5-160] LT per year from Brazil (n=5), Argentina (n=4), Chile (n=4), Ecuador (n-2), Mexico (n=2), Colombia (n=1), Costa Rica (n=1), Peru (n=1), Dominican Republic (n=1) and Uruguay (n=1) answered the survey. Tacrolimus, mycophenolate and prednisone was the main immunosuppressive regimen employed by most (72%) centers and 81% of them referred basiliximab use for induction therapy in selected patients. Tailoring of immunosuppression was universally accepted, particularly in autoimmune hepatitis (AIH) (59%), hepatocellular carcinoma (54%) kidney dysfunction (77%) and primary biliary cirrhosis (33%). Weaning of corticosteroids at three, six and 12 months after LT was reported, respectively, by 41%, 36% and 23% of the centers, but policy for lifelong corticosteroid use in AIH-transplanted subjects was commonly observed (90%). Just four centers are currently performing protocol liver biopsies, while 18 of them are considering liver biopsy prior to steroid pulse therapy. HBIG and nucleos(t)ide analogs are used in most instances (73%) for HBV recurrence prevention, whereas CMV infection prophylaxis was shown to vary sharply across centers. Of note, all but two of them referred major changes in LT practice over the years due to economical restraints.

Conclusions: Compliance with standard of care recommendations for management of LT was reported by most centers. Heterogeneity in practices regarding HBV infection recurrence and CMV prophylaxis may reflect local financial restraints and point to the importance of developing ALEH guidelines to encourage LT activity in LATAM.

https://doi.org/10.1016/j.aohep.2023.101257

O- 8 PNPLA3 RS738409 C>G POLYMORPHISM IMPACT ON HCV-RELATED HCC DEVELOPMENT IN THE BRAZILIAN POPULATION: PRELIMINARY RESULTS

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Introduction and Objectives: The PNPLA3 rs738409 C>G polymorphism has been associated with hepatocellular carcinoma (HCC) and liver cirrhosis regardless of the etiology, although the association was stronger with non-viral etiologies. However, the influence of PNPLA3 polymorphism on Hepatitis C Virus (HCV) and whether this polymorphism could be a risk factor for HCV-related HCC is not well defined. We aimed to evaluate the influence of the PNPLA3 rs738409 C>G polymorphism on the risk of HCC occurrence in HCV patients in Brazil.

Materials and Methods: This study included 90 patients with HCV-related cirrhosis and HCC who underwent liver transplantation or resection at a tertiary center in Brazil and 111 patients non-HCC with HCV-related cirrhosis, as the control group. The rs738409 polymorphism was detected in the DNA extracted from patients' blood samples using the TaqMan assay. All clinical data were collected using the Research Electronic Data Capture (REDCap) tool. The statistical analyses were performed using Jamovi software version 2.3.23.

Results: In the HCV+HCC group there was a higher proportion of male gender (79.1% vs. 45.9%, p<0.001), history of alcoholism (80.5% vs. 22.5%, p<0.001) and smoking (68.9% vs. 25.2%, p<0.001), however there was no statistical difference in age (p=0.519) and BMI (p=0.403) between both groups. The genotype frequencies of the rs738409 polymorphism in the HCV+HCC group was CC 41,2% CC and CG/GG 58,8% vs. controls CC 49,5% and CG/GG 50,5%. The presence of the G allele was not an independent factor associated with the risk of HCC occurrence (r=0,199, p=0.53).

Conclusions: Even in an admixed population such as the Brazilian, there was no association between the PNPLA3 rs738409 C>G polymorphism and the risk of developing HCV-related HCC, as previously shown in published studies in caucasian and oriental population.

https://doi.org/10.1016/j.aohep.2023.101258

O-9 PRESENCE OF METABOLIC ASSOCIATED LIVER DISEASE IN AUTOIMMUNE HEPATITIS IS ASSOCIATED WITH ADVANCED LIVER FIBROSIS

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Introduction and Objectives: Metabolic associated liver disease (MAFLD) is one of the most frequent causes of chronic liver disease worldwide. Steatohepatitis is a major risk factor for fibrosis and its progression. MAFLD might be present in other causes of chronic liver damage, such as autoimmune hepatitis (AIH). There is scarce information of the role of MAFLD in fibrosis in patients with AIH. This study aimed to describe frequency of steatosis, steatohepatitis and fibrosis in AIH liver biopsies and the impact of steatosis and steatohepatitis on fibrosis severity and survival.

Materials and Methods: Observational, retrospective study of liver biopsies performed prior to initiation of immunosuppressive therapy, between 2014 and 2019. Presence of steatosis, steatohepatitis and fibrosis was recorded. Alcohol and other etiologies of liver disease were excluded. Clinical data was obtained from electronic charts and outcome variables by telephone contact. Chi2 and exact Fisher test and Odds Ratio (OR) were performed ($p < 0.05$ considered statistically significant).

Results: 131 biopsies were analyzed; 76% were female, mean age 56 (15-83) years. Steatosis was present in 27%, steatohepatitis in 14% and advanced fibrosis (≥ F3) in 60%. All patients with steatohepatitis had advanced fibrosis (≥ F3). Presence of steatosis was an independent risk factor for advanced fibrosis (OR 2.97, CI95% 1.22 – 7.21 p = 0.016) and mortality (OR 2.60 (IC95% 1.08 – 6.29), p = 0.033). We performed a sub-analysis including only 66 patients with follow-up were decompensations and hospitalizations were no different between the 2 groups.

Conclusions: In this cohort of autoimmune hepatitis liver biopsies, steatosis and steatohepatitis were risk factors for advanced fibrosis. All patients with steatohepatitis had advanced liver fibrosis and mortality was higher in patients with steatosis. In patients with AIH, MAFLD should be treated to avoid progression to fibrosis.

N = 131	Steatosis n = 35	Without steatosis n = 96	Valor p
Female gender	26 (74)	73 (76)	0.836
Age (median; min – max)	56 (21 – 82)	56 (15 – 83)	0.727
Body Mass Index (median; min – max)	31.2 (22.9 – 43.15)	26 (19 – 44.4)	**0.0002**
Comorbidities			
Diabetes	11 (32)	13 (15)	**0.036**
Hypertension	13 (38)	22 (25)	0.158
Laboratory (median; min – max)			
Bilirubin	1.3 (0.2 – 6.3)	1.6 (0.2 – 33)	0.109
INR	1.16 (1 – 2.08)	1.19 (0.9 – 2.28)	0.809
Platelets	133000 (46000 – 287000)	193000 (48000 – 491000)	**0.006**
Advanced fibrosis (≥ F3)	27 (77)	51 (53)	**0.013**
Mortality	12 (34)	16 (17)	**0.030**

https://doi.org/10.1016/j.aohep.2023.101259

O-10 VALIDATION OF SERUM BIOMARKER PANELS FOR EARLY HCC DETECTION: RESULTS FROM A LARGE PROSPECTIVE LATIN AMERICAN MULTICENTER STUDY

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Introduction and Objectives: New hepatocellular carcinoma (HCC) surveillance approaches including PIVKA-II, AFP, and the GALAD panel of serum biomarkers are linked to HCC, but inconsistent use in guidelines limits their value. This study aimed to determine the validity of known and novel serum biomarkers to detect liver cancer in a Latin American cohort.

Materials and Methods: In a multi-center study, 2045 patient samples were retrospectively or prospectively collected from 7 countries in Latin America and Europe and analyzed for cancer and liver disease etiology. The performance of multivariable models based on AFP and PIVKA was tested for early-stage HCC detection, low AFP HCC, 12 months pre-diagnostic HCC (n=92, range 9-15 months), and compared to cirrhosis and other liver tumors.

Results: The GALAD model showed excellent ability to differentiate HCC from liver cirrhosis in our prospective Latin American cohort, with an AUC of 87.9. Sub-analysis of early HCC still demonstrated excellent performance in Latin American cohort. A novel multivariable model was developed to detect early-stage HCC with low AFP levels, by combining sex, age, AFP, and PIVKA-II (also called GAAD), which resulted in AUC of 87.3. Both GALAD and GAAD effectively differentiated low AFP HCC from cirrhosis in both European and Latin American patients, with AUCs of 82.8 and 81.6, respectively. Importantly, GAAD differentiated non-cirrhotic HCC (n=243) from other malignant and benign liver tumors with an AUC of 91.9, and it was 100% sensitive and specific in hemangioma cases (n=64).

Conclusions: We validated for the first time the GALAD model in a large cohort of Latin American HCC patients. We demonstrated comparable performance of GALAD model with the GAAD model developed on data from our European Latin American cohorts. Our findings provide additional information for consideration of these markers in international guidelines for HCC surveillance.

https://doi.org/10.1016/j.aohep.2023.101260

O-11 ENHANCEMENT OF F4/80+CD11B-CD206+ KUPFFER CELLS IN LIVER TISSUE: EFFECT OF MARESIN-1 AS HEPATOPROTECTIVE AGENT

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Introduction and Objectives: Chronic liver diseases (CLD) are a major global health burden and are the 11th leading cause of death and the 15th cause of morbidity worldwide. CLD could be associated with steatosis and fibrosis and progress to cirrhosis, with the concomitant liver failure. Currently, there is no approved treatment and it is only recommended to eliminate the causative agent or give palliative treatments. The immune response, particularly hepatic macrophages (Kupffer cells), play a fundamental role in the development of liver disease. It is known that well-differentiated populations coexist in the liver, including: F4/80+CD11b- (sessile) and F4/80+CD11b+ (migrated from bone marrow). These populations could be modified their phenotype from M1 (inflammatory) to M2 (anti-inflammatory), which is of pharmacological interest. We aimed to study the administration of Maresin-1, a derivative of omega-3 fatty acids, promote a restorative state by an increase in the CD206+CD86-CD11c- i.e. M2 Kupffer cell population.

Materials and Methods: male C57bl/c mice were subjected to liver fibrosis by i.p diethylnitrosamine (DEN) 50 mg/kg twice a week and treated with MaR1 (4ng/g) for 9 weeks. The liver macrophages were isolated: real-time qPCR flow and cytometry were made. In addition, MaR1 was administered to healthy mice to observe the role MaR1 on hepatic macrophage populations.

Results: The administration of MaR1 modifies the Kupffer cells populations, generating an increase in the subpopulations of M2 F4/80+CD11b-CD206+ and F4/80intCD11b+CD206+, with a decrease in the CD86+CD11c+, both in the fibrosis as in healthy mice. This was accompanied by an increase in IL-10 cytokines and a fall in TNF-a values.

Conclusions: Taken together, these results indicate that Mar1 switches the Kupffer cells towards an anti-inflammatory, restorative and resolving state, acting as a hepatoprotective agent.

https://doi.org/10.1016/j.aohep.2023.101261

O-12 HELICOBACTER PYLORI VIRULENCE GENES ARE ASSOCIATED WITH NAFLD SEVERITY: A CROSS SECTIONAL STUDY IN DYSPEPTIC PATIENTS

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Introduction and Objectives: Recent studies have suggested an association between Helicobacter pylori (Hpyl) and non-alcoholic fatty liver disease (NAFLD). The current study aimed to examine the association of Hpyl virulence genes and NAFLD in dyspeptic patients.

Materials and Methods: prospective multicenter study from 2019 to 2022 in northeast Argentina. We evaluated 386 dyspeptic patients who fulfilled the ROME III criteria and underwent gastroscopy. NAFLD was defined by ultrasound in the absence of other known liver diseases. cagA, vacAs1/s2, vacAm1/m2 were analyzed by PCR.

Results: The prevalence of NAFLD was 41% (156/383), no association with Hpyl status was observed. In NAFLD subjects, Hpyl+ showed higher AST (Hpyl+: 30 (21) UI/mL vs. Hpyl-: 22 (13) UI/mL, p:0,001), ALT (Hpyl+: 32 (25) UI/mL vs. Hpyl-: 25 (17) UI/mL, p: 0,0018) and FIB-4 (Hpyl+: 1,3 (1) vs. Hpyl-: 0.99 (0.6), p: 0,009). Indeed, Hpyl+ was associated with FIB-4>1,3 (Hpyl+: 54% vs. Hpyl-: 27%, p: 0,009). cagA and vacAm1 were associated with higher ALT (cagA 40 (23) UI/mL, p:0,003, vacAm1 44 (24) UI/mL, p:0,004). Also, higher FIB-4 values were observed with cagA (1,3 (0,9), p: 0,02) and vacAm1 (1.34 (0.8), p: 0,001) with more proportion of patients with FIB-4>1,3 with cagA 54% (p: 0,008) and vacAm1 55% (p: 0.007). The allelic combination vacAs1/m1+cagA showed higher AST (34 (22) UI/mL, p: 0,001), ALT (44 (24) UI/mL, p: 0,004) Fib-4 (1,34 (0,8), p:0.001) with significantly more proportion with FIB-4>1,3 (62%, p: 0,019).

Conclusions: In NAFLD/dyspeptic patients, Hpyl infection was associated with markers of liver injury and fibrosis. cag-A, vacAm1 strains and the allelic combination vacAs1/m1/cagA were associated with higher ALT and FIB-4.

https://doi.org/10.1016/j.aohep.2023.101262

O-13 SUB-OPTIMAL GLOBAL PUBLIC HEALTH POLICIES AND STRATEGIES TO TACKLE HEPATOCELLULAR CARCINOMA

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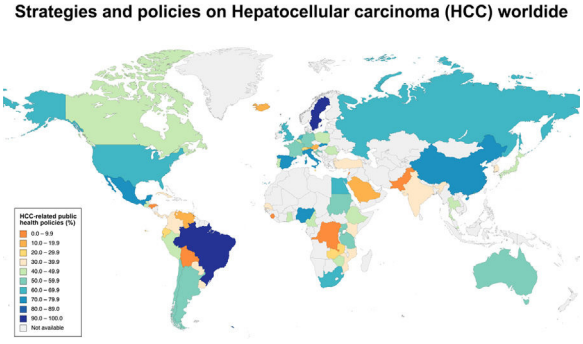
Introduction and Objectives: Hepatocellular carcinoma (HCC) is the third most common cause of cancer-related deaths worldwide. We aimed to explore HCC-related population-wide public health policies (PHP) worldwide.

Materials and Methods: We conducted a 43-item survey about HCC: policies and civil society (18 questions), clinical guidelines (5 questions), epidemiology (7 questions), and care management (13 questions). The survey was completed electronically (2022–2023). Data were collected in a spreadsheet, revised by two independent reviewers, and verified with governmental institutions, regulatory agencies, scientific societies, and scientific publications. We classified policies into eight dimensions, including criteria for low, moderate, and strong PHP establishment. We estimated an index using multiple correspondence analysis.

Results: We obtained 134 responses from 66 countries/territories (Africa N=16, the Americas N=18, Asia N=10, Europe N=21, and Oceania N=1). The median index was 43.7 [IQR: 30.9–59.3]. The lower scores were observed in Sierra Leone (0), Lebanon (5.5), and Pakistan (5.5), while Italy (79.7), Brazil (94.1), and Sweden (100) obtained the highest scores (Figure). In particular, 46 (69.7%) countries had a written national cancer strategy or action plan, but only 5 (7.6%) had a specific written national strategy or action plan on HCC. Thirty-two (48.5%) countries had national clinical practice guidelines on HCC and 54 (81.8%) countries had a national disease registry that included HCC. The most common strategies for staging HCC were Barcelona Clinic Liver Cancer (BCLC)(85%) and TNM classification (10%). The survey reflects important differences in the availability of treatments, including surgery (98.4%), tyrosine kinase inhibitors (95.1%), chemoembolization (85.2%), radiofrequency or alcohol ablation (82%), immunotherapy plus anti-VEGF (82%), liver transplant (74.2%), stereotactic body radiation therapy (42.6%), and radioembolization (36.4%).

Conclusions: The existence of PHP on HCC is insufficient worldwide. The most common strategy for staging is BCLC, but there are important differences in treatment availability across countries, especially regarding curative therapies.



https://doi.org/10.1016/j.aohep.2023.101263

O-14 NON-ALCOHOLIC FATTY LIVER DISEASE IS INFLUENCED BY THE INTERACTION OF HELICOBACTER PYLORI INFECTION AND G-ALLELE OF PNPLA3

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Introduction and Objectives: The pathophysiology of NAFLD is only partially unrevealed; it is considered as a multifactorial disorder, attributed to multiple, parallel "hits," both genetic and environmental. It has been described that the single nucleotide polymorphism at rs738409 in the PNPLA3 gene is strongly associated with hepatic steatosis and its progression. Conversely, H. pylori infection has been related to metabolic syndrome, type-2 diabetes mellitus, and dyslipidemia, which are known risk factors for NAFLD. However, the evaluation of Infection and the rs738409 polymorphism in the PNPLA3 gene has not been explored.

Materials and Methods: this is a preliminary report of a prospective multicenter study from December 2020 to June 2021 in northeastern Argentina. 76 dyspeptic adult patients who fulfilled the ROME-IV criteria and underwent gastroscopy, of which 69 were included. The presence of H. pylori was determined by gastric histology. Biochemical and clinical parameters were recorded. NAFLD was defined by liver ultrasonography. The PNPLA3 gene was analyzed by PCR-RFLP in rs738409.

Results: The prevalence of NAFLD was 45% (31/69), with Hpyl+ 48% (17/36) and Hpyl- 42% (14/33) (p: ns). The variables significantly associated with NAFLD were BMI, dyslipidemia, Diabetes/prediabetes, presence of the G allele of PNPLA3, and the GG genotype. In the multivariate analysis, BMI (OR 1.63 95%CI 1.22-2.19) and the G-allele of PNPLA3 (OR 7.35 95%CI 1.34-40) were independently associated with NAFLD. When subjects with NAFLD were analyzed, the interaction between Hpyl and PNPLA3 allele-G was significantly associated with NAFLD (65%) and increased risk of liver fibrosis (FIB-4 > 1.3 41%).

Conclusions: the presence of NAFLD was associated with BMI and G-allele of PNPLA3. The combination of Hpyl infection and the G-allele of PNPLA3 were associated with NAFLD and risk of fibrosis (FIB-4)

https://doi.org/10.1016/j.aohep.2023.101264

O-15 MARESIN1 REVERSES CHRONIC LIVER FIBROSIS AND IMPROVES REGENERATION

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Introduction and Objectives: Hepatic fibrosis (HF) is characterized by the progressive accumulation of extracellular matrix (ECM), which destroys the physiological architecture of the liver. Pathologically, chronic liver diseases lead to damaged hepatocytes and

infiltration of immune cells that activate collagen-producing hepatic stellate cells (HSCs), leading to excessive ECM production, and causing uncontrolled scarring. Maresin1 is a derivative of -3 docosahexaenoic acid (DHA), which has been shown to have pro-resolving and anti-inflammatory effects in various organs like those observed for DHA. This study aimed Mar1+DHA supplementation would prevent the development of fibrosis and promote regeneration in an animal model of chronic liver damage.

Materials and Methods: FH was induced in Sprague-Dawley rats by injections of diethylnitrosamine (DEN, 50 mg/kg) and treated with MaR1 (4ng/g) and/or DHA (375 mg/kg) for five weeks. Transaminases, liver histology, and proteins were analyzed by western blot.

Results: the DHA+ MaR1 group showed a greater positive response (significant) than MaR1 in terms of normalization of AST and ALT levels, and architecture of the liver. Reducing inflammation and necrosis. Furthermore, both MaR1 and DHA reduced the levels of TGF-, its receptor TGFRII, and TIMP1, increasing MMP1. Results that coincide with the quantification of type I collagen fibers in tissue. On the other hand, they would promote liver regeneration by increasing Cyclin D1.

Conclusions: Both MaR1 and MaR1/DHA improve regeneration and DEN-induced liver fibrosis parameters, promoting regeneration and acting as an antifibrotic agent. Results that open the possibility that MaR1/DHA are potential therapeutic agents in fibrosis and other liver pathologies.

https://doi.org/10.1016/j.aohep.2023.101265

O-16 DIFFERENCES IN HEPATOCARCINOMA IN PATIENTS WITH CIRRHOSIS DUE TO NONALCOHOLIC FATTY LIVER DISEASE (NAFLD) VS. OTHER ETIOLOGIES

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Introduction and Objectives: Non-alcoholic fatty liver disease (NAFLD) is the fastest growing cause of hepatocarcinoma (HCC) in the USA and parts of Europe and is expected to increase exponentially in parallel with the global obesity epidemic. This study aimed to determine the differences in the characteristics of HCC in patients with NASH vs. other etiologies.

Materials and Methods: Observational, descriptive study of patients with a diagnosis of HCC presented to the HCC Committee and included in the local Research Registry between March and December 2022. Demographic, clinical and tumor variables at HCC diagnosis were collected. Survival was assessed based on death certificates. Chi2 was calculated considering $p<0.05$ significant.

Results: During the study period, 143 patients were presented to the HCC Committee; 109 of them fulfilled the criteria for this study, 66 with NAFLD etiology (61%) and 43 with cirrhosis due to other etiologies (39%). When comparing sociodemographic and clinical variables in relation to cirrhosis etiology, higher average age (67 vs. 63; p=0.027), lower frequency of men (51% vs. 73%, p=0.026), lower Child-Pugh (Child-Pugh A 55% vs. 40%, p=0.033) and lower average Meld-Na (10.5 vs. 12, p=0.075) were observed in the NAFLD groups vs. other etiologies. No differences were observed in laboratory analysis at HCC diagnosis. There were also no differences in tumor characteristics or recommended therapies. Survival was higher in the NAFLD group, although it was not significant (76% vs. 65%, p=0.228).

Conclusions: HCC in patients with NAFLD cirrhosis occurs more frequently in women, older patients and with better overall probably related to the severity of the chronic liver disease. No differences were observed in tumor characteristics or suggested treatment options, with loco-regional therapy being the most indicated (45% of all patients).

	Total N = 109 (%)	NAFLD N = 66 (%)	Other etiologies N = 43 (%)	P value
HCC characteristics				
N° of lesions Single Multiple	 53 (49) 56 (51)	 32 (48) 34 (52)	 21 (49) 22 (51)	 0.971
Size of the largest lesion (mm)	37 (11 – 170)	36 (11 – 140)	45 (11 – 170)	0.267
Sum of lesions size (mm)	51 (11 – 190)	51 (12 – 190)	50 (11 – 175)	0.857
Portal vein involvement	16 (15)	6 (9)	10 (23)	0.053
Extrahepatic disease	5 (5)	4 (6)	2 (5)	1
HCC treatment suggestion				
Loco-regional therapy Surgery Liver transplant Systemic chemotherapy Palliative care Image and clinical follow-up	49 (45) 16 (15) 19 (17) 14 (13) 5 (5) 6 (6)	32 (48) 9 (14) 11 (17) 7 (11) 3 (5) 4 (6)	17 (40) 7 (16) 8 (19) 7 (16) 2 (5) 2 (5)	0.432 0.784 0.801 0.397 1 1
Survival				
Mortality	31 (28)	16 (24)	15 (35)	0.228

https://doi.org/10.1016/j.aohep.2023.101266

O-17 NUTRICIONAL AND PHYSICAL THERAPHY IMPROVES LIVER FRAILTY INDEX IN LISTED PATIENTS WITH CIRRHOSIS: RANDOMIZED CONTROLLED TRIAL. INTERIM ANALYSIS

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Introduction and Objectives: Frailty is independently associated with a lower survival in cirrhotic patients. Liver Frailty Index (LFI) determine frailty in listed patients predicting survival. This study aimed to evaluate the effect of a physical and nutritional therapy (intervention group) over LFI compared with a physical and nutritional counseling (control group).

Materials and Methods: Patients were recruited and randomized to an intervention group or a control group. Patients were followed for 12 weeks with evaluations every 4 weeks. We compared LFI and LFI at different time points between both groups during the follow-up.

Results: 46 patients were recruited, 27 of them in control group and 19 of them in the intervention group. 50% were women and the most common etiologies were metabolic associated fatty liver disease (37%) and alcoholic liver disease (19.6%), primary biliary cholangitis (6.52%), autoimmune hepatitis (6.52%) and hepatitis C virus (2.17%).

The median (IQR) age was 60 years (53-63 years), MELD-Na 17 (15-21), creatinine 0.75 mg/dl (0.6-0.8) albumin 3.1 g/dl (2.9-3.1), INR 1.54 (1.4-1.75) and bilirubin 2.6 mg/dl (1.4-1.7). Child-Pugh scores were A/B/C 13%/58.7%/28.3% respectively. No differences in baseline characteristics were found between the groups. Notably, there was a significant improvement in LFI (median; IQR) in the intervention group (Figure 1) after 8 weeks LFI 3.74 (3.37-3.97) with LFI -0.86 vs. control group LFI 4.15 (3.94-4.23) with LFI -0.02, p=0.007) and after 12 weeks (intervention group 3.73 (3.31-4.11) with LFI -0.87 vs. control group LFI 4.14 (4.06-4.50) with LFI -0.03, p=0.023).

Conclusions: In this interim analysis nutritional and physical therapy improves LFI. This is the first randomized controlled trial with positive results in listed patients with cirrhosis.

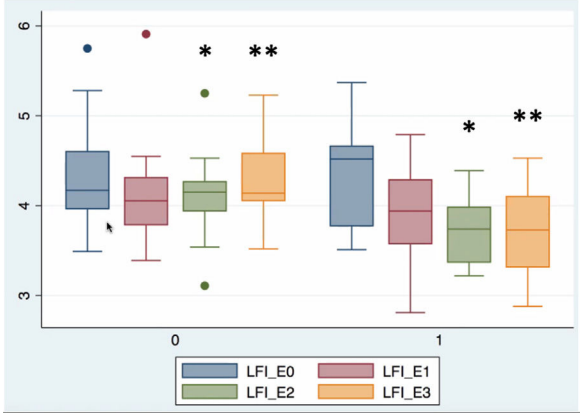

Figure 1. LFI of control group (0) and intervention group (1). LFI_E0: Baseline LFI; LFI_E1: LFI after 4 weeks; LFI_E2: LFI after 8 weeks. LFI_E3: LFI after 12 weeks.

https://doi.org/10.1016/j.aohep.2023.101267

O-18 DIFFERENCES IN BODY COMPOSITION OF MAFLD PATIENTS ACCORDING TO BODY MASS INDEX AND METABOLIC PROFILE

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Introduction and Objectives: Body composition (BC) has been linked to liver steatosis. The aim of this study is to describe differences in BC in MAFLD patients.

Materials and Methods: Liver steatosis was evaluated by controlled attenuation parameter, patients were classified according to body mass index (BMI) and definitions of MAFLD in five groups: G1: <25kg/m2-non-MAFLD; G2: <25kg/m2-MAFLD; G3: 25-30kg/m2-MAFLD; G4:>30kg/m2-MAFLD and metabolically healthy (<3 metabolic abnormalities) (MH) and G5: >30kg/m2-MAFLD and metabolically unhealthy (MU). BC was assessed by bioelectrical impedance obtaining measurements of resistance; reactance; phase angle; percentages of fat; total body water (TBW%); intracellular and extracellular water (ICW%, ECW%) and skeletal muscle mass (SMM%). Differences in BC was analyzed by Kruskall-Wallis test. Continuous data showed as median and IQR.

Results: 140 patients were included (G1 n=30; G2 n=24; G3 n=30; G4 n=26; G5 n=30). 56.4% (n=79) were male with median of age of 49 [41- 55] years. Overweight/obese MAFLD patients showed significant lower resistance and reactance levels (p0.05). According to vectorial analysis, chaquexia was observed in 18.4% (n=7) of patients in G4 and 15.8% (n=6) in G5 patients. Fat% was higher in patients of G5 (MU) than G2 (34.3[29.8-40.4], p=0.02) and G3 (35[31.1-38.3], p=0.01). Obese MAFLD patients showed lower TBW%, ICW% and ECW% (p0.001). (Figure). SMM% was lower in MU obese patients (29.1[26.3-31.1]) compared to healthy controls (33.4[29.3-36.8], p=0.006) and overweight patients (32[29.7-34.4], p=0.02). Phase angle did not show significant differences.

Conclusions: Overweight/obese MAFLD patients shows BC abnormalities in comparison with healthy controls and lean MAFLD patients. Resistance, reactance, body water and skeletal muscle mass are significant lower in both metabolically healthy/unhealthy obese patients. Changes could be explained for the sarcopenia and fat-muscle interchange and no necessary for the presence of metabolic abnormalities.

https://doi.org/10.1016/j.aohep.2023.101268

O-19 IMPLICATIONS OF GLYPHOSATE ON NON-ALCOHOLIC FATTY LIVER DISEASE IN MICE

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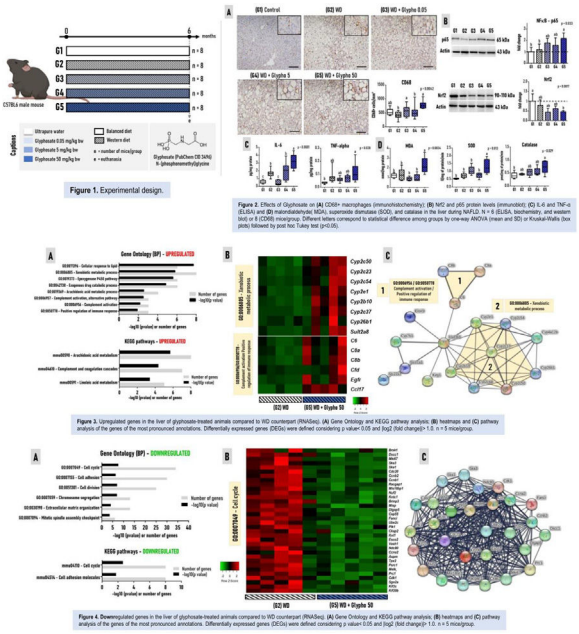
Introduction and Objectives: Non-alcoholic fatty liver disease (NAFLD) affects ~25% of the world's population, presenting a multi-axis pathogenesis closely related to westernized dietary (WD) patterns, and to metabolic comorbidities. In addition to WD, individuals are frequently exposed to crops and dairy products presenting glyphosate (Glypho) residues, the most used broad-spectrum herbicide worldwide. This study aimed to evaluate whether chronic Glypho exposure promotes WD-induced NAFLD.

Materials and Methods: Male C57BL/6J mice were fed WD (chow containing 20% lard, 0.2% cholesterol, 20% sucrose, and high sugar solution with 23.1/18.9 g/L of D-fructose/D-glucose), and received glyphosate (0.05, 5 or 50 mg/kg/day) by gavage (5 × /week) for six months. Doses were below/within the regulatory limits (Acceptable Daily Intake or No Observed Adverse Effect Level).

Results: Glypho did not promote WD-induced obesity, hypercholesterolemia, and glucose intolerance, as this herbicide did not exert major effects on WD-induced hepatic macro/micro vesicular steatosis and perivascular fibrosis. Nonetheless, Glypho at the higher dose (50 mg) exerted the most pronounced effects on enhancing CD68+ macrophage density, p65 (NF-B), TNF-, and IL-6 protein levels in the liver. Furthermore, this dose also decreased hepatic Nrf2 levels, while enhanced lipid peroxidation in the liver and adipose tissue. The hepatic RNASeq analysis revealed that Glypho at 50 mg upregulated 212 genes, while downregulated 731 compared to WD counterpart. Glypho upregulated genes associated to "xenobiotic metabolic process" (Cyp2c37, Cyp2c23, Cyp2c54, Cyp2b10, Cyp2c50, and Cyp2e1), directly involved in oxidative stress, as well as "positive regulation of immune response"-related mRNAs (Egfr, Ccl7, Cfd, C6, C8a, and C8b).

Moreover, Glypho downregulated key “cell cycle”-related genes (as Mki67 and Cdk1).

Conclusions: In essence, our results are innovative on demonstrating that Glypho – in a dose within the regulatory limits – impaired the hepatic inflammation/redox dynamics at the morphological, biochemical and transcriptomic levels.



https://doi.org/10.1016/j.aohep.2023.101269

O-20 EFFECTS OF ISOCALORIC AND NEGATIVE CALORIE BALANCE EXERCISE ON SERUM LEVELS OF INSULIN-LIKE GROWTH FACTOR TYPE 1 IN SUBJECTS WITH INITIAL AND ADVANCED FATTY LIVER

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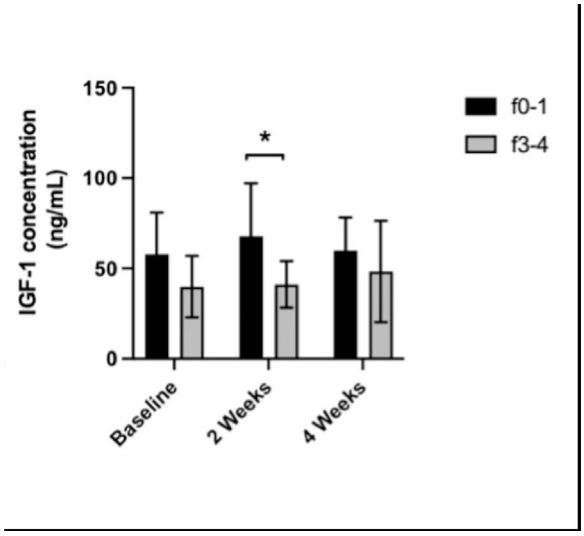
Introduction and Objectives: Insulin-like growth factor 1 (IGF-1) is a hepatokine that has a protective effect on fatty liver. Previous studies in healthy subjects suggest that isocaloric exercise (with neutral caloric balance) would increase serum levels of IGF-1. This study aimed to evaluate the effect of moderate isocaloric exercise (ICBE) and negative caloric balance exercise (NCBE) on serum levels of IGF-1 in subjects with initial and advanced (F3-4) MAFLD (Metabolic Associated Fatty Liver Disease).

Materials and Methods: Prospective trial in postmenopausal women undergoing supervised and standardized exercise at moderate intensity (1 hour, 3 times per week). The study includes subjects with initial MAFLD (F0-2 Fibroscan <8 kPa) and advanced MAFLD (F3-4, Fibroscan >8 kPa). The protocol consisted of an initial two-week period of ICBE (with nutritional supplement) followed by two weeks of NCBE (without supplement). Using the t-student test for paired samples, the change was analyzed pre vs. post-protocol, and the comparison between groups used the analysis for unpaired samples.

Results: We recruited 27 subjects (20 non-advanced MAFLD and 7 advanced MAFLD). We demonstrated that: (1) Exercise did not significantly increase IGF-1 levels in MAFLD; (2) There was a tendency for subjects with initial MAFLD to have higher IGF-1 levels than subjects with advanced MAFLD before and after exercise, which became significant after 2 weeks of exercise (F0-2 67.9 + 6.4 (ng/mL) versus F3-4 41.2 + 5.3 (ng/mL), p 0.047); and (3) There were no significant differences in IGF-1 levels between ICBE and NCBE (figure 1).

Conclusions: Subjects with advanced MAFLD tend to have lower IGF-1 levels than subjects with initial MAFLD, which becomes significant after 2 weeks of exercise. This suggests that the response to exercise in terms of changes in hepatokines (IGF-1) varies depending on the stage of the disease.



https://doi.org/10.1016/j.aohep.2023.101270

O-21 NUTRITIONAL SUPPLEMENTATION WITH MEXICAN FOODS, OPUNTIA FICUS INDICA, THEOBROMA CACAO, AND ACHETA DOMESTICUS IMPROVED GUT-LIVER AXIS IN A MAFLD MICE MODEL.

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Introduction and Objectives: Metabolic-associated fatty liver disease (MAFLD) is the most common liver disease worldwide, several studies have shown that gut microbiota had a strong impact in MAFLD developing. This study aimed to evaluate the effect of a supplementation with a mixture of Mexican foods (MexMix): nopal, cacao and cricket on gut-liver axis.

Materials and Methods: Thirty C57BL/6J male mice were divided into three groups: 1) control group: normal diet. 2) HF group: high fat diet (60%) and water with sucrose and fructose and 3) MexMix group (MexMix): HF diet until week 10 and for 8 additional weeks; HF diet pellets supplemented with 6.7% nopal, 8.7% cocoa and 8.7% cricket.

Results: Mice treated with MexMix decreased body weight, visceral and epididymal fat, and adipocyte size, as well as serum levels of triglycerides, insulin, leptin, and PAI-1; while adiponectin levels increased. Using 16S rRNA gene sequencing, MexMix was shown to increase phylogenetic diversity, Firmicutes abundance, and enrichment of 10 genera, including Lachnospiraceae, Ruminococcaceae, Akkermansia, and Eubacterium_coprostanoligenes_group, associated with multiple beneficial effects such as short-chain fatty acids (SCFAs) production. In the gut, MexMix supplementation increased significantly fecal SCFAs concentration, intestinal crypts depth, Ocln and Cldn1 expression, and decreased Il6 and Tnf-a expression. In liver, MexMix significantly reduced steatosis. Liver transcriptome in MexMix group showed an enrichment in histone H3K14 acetylation pathway. Using qPCR, we confirmed higher hepatic expression of Cat, Sod and lower expression of Tnfa and Pparg. In addition, MexMix diet decreased hepatic expression of miRNA-34a, miRNA-103, and miRNA-33a.

Conclusions: Supplementation with MexMix demonstrated its efficacy as a prebiotic, promoting growth of beneficial genera improving intestinal health. This suggests that MexMix could be a potential therapeutic strategy for treating MAFLD in patients, as well as other conditions linked to excessive consumption of fats and sugars.

https://doi.org/10.1016/j.aohep.2023.101271

O-22 EFFICACY OF ATEZOLIZUMAB BEVACIZUMAB TREATMENT FOR HEPATOCELLULAR CARCINOMA IN REAL-WORLD CLINICAL PRACTICE AT TWO TERTIARY HEALTHCARE CENTERS IN SOUTHERN BRASIL: FIRST INTERIM ANALYSIS

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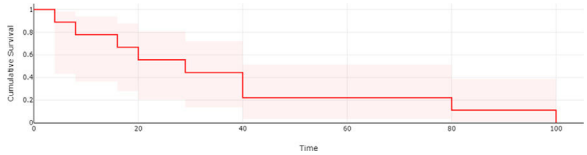
Introduction and Objectives: Atezolizumab and bevacizumab (Atez/Bev) are the new standard of care for first-line systemic therapy of hepatocellular carcinoma (HCC). Real-world data on safety and efficacy of Atez/Bev are scarce in Latin America. We aimed to describe safety and efficacy of Atez/Bev in patients with HCC Barcelona Clinic Liver Cancer (BCLC) B and C stages.

Materials and Methods: Prospective cohort study at two tertiary healthcare centers in Porto Alegre, Southern Brazil, included consecutive HCC patients within BCLC B or C stages started with Atez/Bev as first line therapy between 2020-2023. Demographics, tumor response, overall survival (OS), and adverse events were assessed.

Results: A total of 20 patients, 16 males (80%), all with cirrhosis (HCV 13, HBV 3, NASH 3, alcohol 1). Child-Pugh were A and B (17 and 3, respectively). Median MELD was 8 (IQR 7-10.5) and median age 70.5 years-old (IQR 61-72.8). Median baseline alfa-fetoprotein was 36.8 (IQR 6.6-2.696). Esophageal varices in 11 individuals (65%). Majority (19/20) was BCLC stage C and ECOG 0/1. Previous HCC treatment was surgery (n=2, 10%), radiofrequency ablation (n=1, 5%) or transarterial chemoembolization (n=10, 50%). Macrovascular invasion and extra-hepatic metastasis were detected in 9 (45%) and 5 (25%) patients, respectively. Median Atez/Bev cycles were 5.5 (IQR 3-8.8) and dose reduction occurred in 5 patients (25%). Tumor response was evaluated in 13 patients: partial response in 3 (23.1%), stable disease in 1 (7.6%), and progressive disease in 9 (69.3%). Median follow-up (last visit or death) was 31.5 weeks (IQR 16-47.5). Median OS was 55% (Fig 1). Cirrhosis decompensation occurred in 11/20 individuals (55%) with variceal bleeding in 5/20 (25%), which was the only significant variable associated with mortality (p=0.04).

Conclusions: Atez-Bev in a real-world cohort of intermediary and advanced HCC patients showed efficacy and safety comparable to published studies with similar inclusion criteria.



https://doi.org/10.1016/j.aohep.2023.101272

O- 23 STRATEGIES TO ELIMINATE HEPATITIS C VIRUS INFECTION IN THE AMERICAS

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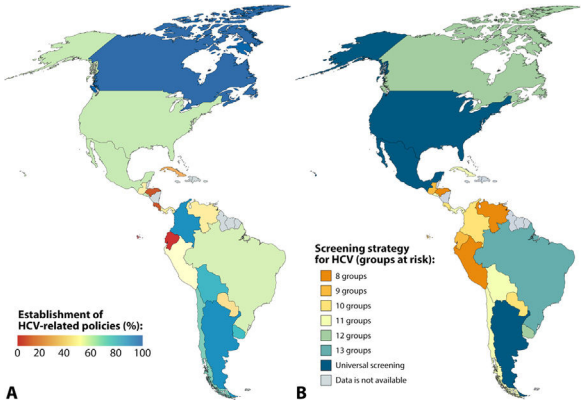
Introduction and Objectives: Although the WHO strategy aims to eliminate the hepatitis C virus (HCV) as a public health threat by 2030, national strategies are variable worldwide. This study aimed to assess the establishment of different policies and strategies to eliminate HCV in the Americas.

Materials and Methods: We conducted a 23-item survey about HCV-related policies and strategies among gastroenterologists and hepatologists in the Americas. The survey was carried out electronically (2022–2023). Data were compared with governmental institutions, regulatory agencies, scientific societies, and scientific publications. We estimated an index obtained from a regression scoring method through exploratory analysis, and row values were normalized from 0 to 100.

Results: We obtained 52 responses from 19 countries. The median HCV-related policies index was 51.4 [IQR:27.3–70.1]. The lower establishment of HCV-related policies was observed in Ecuador (0.0), Honduras (6.6), and Costa Rica (9.8), while the highest performance was observed in Argentina (94.1), Colombia (94.7), and Canada (100) (Figure 1A). Fifteen (78.9%) countries have adopted a national strategic plan to eliminate HCV. Three (15.8%) countries have universal screening for HCV infection (Figure 1B). After a positive HCV serological test, 10 (52.6%) countries perform reflex testing to confirm HCV diagnosis using the same sample. However, only 7 (36.8%) countries have an alert system for the requesting physician. Twelve (63.2%) countries have a direct referral system for specialized care of HCV-positive cases. Universal access to direct-acting antivirals (DAAs) exists in 15 (78.9%) countries. Universal access to DAAs was not widely available in Cuba, Ecuador, Venezuela, and the United States. Seven (36.8%) countries have generic DAAs available. Only 3 (15.8%) countries performed a retrospective search for HCV-positive cases that could have been lost to follow-up.

Conclusions: Although most countries have adopted a national strategic plan to eliminate HCV, there are several issues and barriers to elimination in the Americas.



https://doi.org/10.1016/j.aohep.2023.101273

OP-1 FEATURES OF IDIOSYNCRATIC DRUG-INDUCED LIVER INJURY (DILI) IN LATIN AMERICA: LONG-TERM EXPERIENCE OF THE LATINDILI NETWORK

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Introduction and Objectives: The Latin American DILI (LATINDILI) Network is an international registry of prospectively identified drug-induced liver injury (DILI) cases to enhance case characterization. We aimed to analyze features and outcomes of DILI in Latin America.

Materials and Methods: Information of DILI cases included in the LATINDILI database between 2011 and July 2022 was collected and analyzed.

Results: Of 468 patients included, 13 had positive rechallenge and 5 recurrent DILI (different drugs). Mean age was 49 years (range 14-89), 62% women. The most common type of injury was hepatocellular (62%). Overall, 42% of patients were hospitalized. Most cases were mild/moderate, but 6.2% were considered severe, and 4.1% resulted in death/liver transplantation. Overall, eleven cases (2.4%) developed chronic DILI (no biochemical resolution within one year), and nine had drug-induced autoimmune-like hepatitis (1.9%).

Histological information was available for 80 patients (17%), of whom 5 had chronic cholestasis with ductopenia. The most frequent drugs were amoxicillin-clavulanate (12%), herbal and dietary supplements (HDS, 9%), anabolic androgenic steroids (4.9%), anti- tuberculosis medications (anti-TB) and nitrofurantoin (4.3% each). Among the 15 most common causative agents, all but azathioprine, were associated with cases fulfilling nR-based Hy's law. However, only anti-TB, nimesulide and HDS were associated with worst outcome cases, while many were not, such as amoxicillin-clavulanate, nitrofurantoin and diclofenac. Causative agents more common in women included methyldopa (100%) nitrofurantoin (95%) and nimesulide (86%), while cyproterone (100%) and phenytoin (67%) were more common in men.

Conclusions: The increasing number of liver injuries associated with HDS is a major concern in Latin America. The predictive value of the nR-based Hy's law is drug-specific. These findings have regulatory implications for the promotion of public health, as common DILI- causing drugs in Latin America are either second-line drugs, no longer in use, or have been withdrawn from other markets due to liver toxicity. Funding: AEMPS, CIBERehd,ISCIII-FEDER (PI21/01248, PI-0310-2018).

https://doi.org/10.1016/j.aohep.2023.101274

OP-2 ANALYSIS OF THE GENETIC DIVERSITY OF HEPATITIS DELTA VIRUS CIRCULATING IN BRAZIL BETWEEN 2013 AND 2021 AND ITS RELATIONSHIP WITH HEPATITIS B VIRUS

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Introduction and Objectives: Hepatitis D virus (HDV) is a defective virus dependent on the hepatitis B virus (HBV) to replicate. Currently, HDV is divided into 8 genotypes and several subgenotypes, HDV-1 and 3 being predominant in Brazil. Although crucial to understanding the evolution and spread of the virus worldwide, few studies address the genetic variability of the complete HDV genome. This study aimed to investigate the genetic variability of HDV in Brazil.

Materials and Methods: From 41 anti-HDV positive sera collected between 2013 and 2021 in distinct Brazilian regions, 12 HDV genomes were obtained by RT-PCR. Additionally, a fragment of ~900 base of S/POL regions of HBV genome was PCR amplified. The amplicons were sequenced using the Sanger method and phylogenetically analyzed.

Results: The phylogeny showed the circulation of HDV-3 (10/12; 83,3%), HDV-5 (1/12; 8,3%) and HDV-8 (1/12; 8,3%). Most HDV-3 samples (8/10; 80%) were found in the endemic North Brazilian region, while two were found in Brazilian non-endemic areas. HDV-5 and 8, whose circulation is usually restricted to African countries, were found in São Paulo, a cosmopolitan city from Southeast Brazil. Phylogenetic analysis of HDV-8 strains indicated that the sample in our study, along with previously reported sequences from Brazil, formed a highly supported monophyletic clade, probably representing a new HDV-8 subgenotype. Among HBV sequences, the association between HDV/HBV genotypes was: HDV-3/HBV-F2 (5/11; 41.7%), HDV-3/HBV-A1 (2/11; 18.2%), HDV-3/HBV-D3 (1/11; 9.1%), HDV-3/HBV-D4 (1/11; 9.1%), HDV-5/HBV-E (1/11; 9.1%) and HDV-8/HBV-E (1/11; 9.1%). The HBV genotypes commonly found in Brazil, HBV-A, HBV-D and HBV-F, were detected in coinfection with HDV-3, endemic in the country. However, HBV-E, native from Africa, was found in coinfection with HDV-5 and HDV-8, suggesting allochthonous infection.

Conclusions: This study emphasizes the importance of epidemiological surveillance in mapping HDV transmission pathways and imported variants.

https://doi.org/10.1016/j.aohep.2023.101275

OP-3 HCV MICROELIMINATION PROGRAM IN HEMODIALYSIS PATIENTS: SUCCESS OF A MULTI-STAKEHOLDER PARTNERSHIP BASED ON A NATIONAL ERADICATION STRATEGY

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Introduction and Objectives: Direct-acting antivirals (DAAs) are highly effective in patients with chronic kidney disease in hemodialysis and chronic hepatitis C (HCV). The treatment of HCV in this population brings multiple benefits, including improved survival of the patient on dialysis and reduction of contagion in the dialysis room by achieving eradication. Our aim was to evaluate the effectiveness of DAA treatment in this population in routine clinical practice in Argentina using a multidisciplinary network of nephrologists and hepatologists, within the framework of the national micro-elimination strategy of the Viral Hepatitis Program of the Ministry of Health.

Materials and Methods: In this prospective multicenter cohort study, all patients on dialysis at Fresenius Argentina, were screened for anti-HCV. All HCV RNA- positive patients were offered treatment with Sofosbuvir/Velpatasvir (SOF/VEL) and Glecaprevir/Pibrentasvir (GP) according to national guidelines. FIB-4 and APRI scores, and liver stiffness (LSM) when available, were performed in all HCV RNA-positive patients before treatment. Those with F3-4 by LSM, FIB-4 >3.25 and/or APRI >1.5 were evaluated by a hepatologist. DAAs therapy was initiated in each dialysis unit under the supervision of hepatologists by telemedicine.

Results: A total of —10,144 patients from all hemodialysis units were evaluated between January 2018 and December 2022. A total of 323 (3.18%) were anti-HCV positive, of which 149/323 (46.13%) had detectable HCV RNA. Genotype 1 was the more prevalent (69%) and most patients had mild fibrosis (26% had F3-F4). By May 2023, 82 patients were evaluated 12 weeks after the end of treatment:76 achieved SVR (92,6%), 3 died, 1 stopped treatment due to intolerance, and 2 were lost to follow-up.

Conclusions: A multi-stakeholder partnership model as a national micro-elimination strategy increased the treatment rates for HCV in dialysis units with acceptable effectiveness in this special population. This microelimination model is on the way to the WHO elimination program for 2030.

https://doi.org/10.1016/j.aohep.2023.101276

OP-4 DEVELOPMENT AND EXTERNAL VALIDATION OF A MODEL TO PREDICT MULTI-DRUG RESISTANT BACTERIAL INFECTIONS IN PATIENTS WITH CIRRHOSIS

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Introduction and Objectives: Empirical antibiotic treatment for suspected infections in cirrhosis is crucial. This study aimed to

develop and validate a model to predict the probability of infections by multi-drug resistant organisms (MDRO) in patients with cirrhosis.

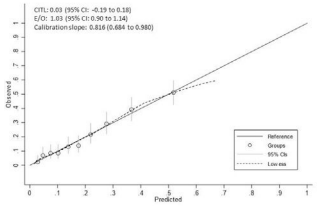
Materials and Methods: Cross-sectional study (NCT05641025) of in-patients with bacterial infections from two prospective studies. A global transcontinental study was used for model development and internal validation (n = 1,302), and a study from Argentina and Uruguay (n=472) was used for external validation. Infection by MDROs was defined as an infection caused by at least one bacteria with acquired resistance to at least one antibiotic of three different families. A stepwise selection process was used for model development and bootstrapping for internal validation.

Results: The prevalence of infection by MDROs was 19% in the development and 22% in the external validation dataset. Most frequent infections were spontaneous bacterial peritonitis (SBP) and urinary tract infection (UTI). Half of the infections were community-acquired, and half were equally distributed among healthcare-associated and nosocomial origin. The model predictors are shown in the figure. Very good calibration was achieved in internal and external validation (Figure). Discrimination was adequate: area under the receiver operating characteristic curve (AUROC) of 0.73 (95% CI: 0.69 - 0.76) in internal validation and 0.67 (95% CI: 0.62 - 0.74) in external validation. When applying a probability cut-off point of 5% to the external dataset, a negative predictive value (NPV) of 93% (95% CI: 84% - 98%) was observed.

Conclusions: This easy-to-implement model achieved adequate performance for predicting infections by MDROs in patients with cirrhosis, offering costless bedside individualized risk estimates that might improve the selection of empiric antibiotics. Its high NPV suggests that it could be used as a rule-out tool, particularly in patients at higher risk of infection by MDROs, reducing the use of broad- spectrum antibiotics.

Figure. Calibration of the model in internal validation and predictors included in the model.

Calibration of the model in Internal validation



Perfect calibration occurs when the straight line and the dotted line overlap. CITL: Calibration in the large, which is an average over all individuals (the closer to 0, the better the model calibrates). E/O: expected outcomes by the model over observed outcomes (the closer to 1, the better the model calibrates). Calibration slope is the *beta* of the model (the closer to 1, the better the model calibrates)

Predictors included in the model

Predictor	OR (95% CI)
Sex	1.29 (0.92 - 1.83)
Prior antibiotic treatment	1.79 (1.30 - 2.47)
SBP	0.36 (0.22 - 0.59)
UTI	3.31 (2.19 - 5.02)
Nosocomial infection	2.46 (1.65 - 3.65)
HCA infection	1.81 (1.20 - 2.74)
ACLF at infection	0.54 (0.36 - 0.80)
ICU at infection	2.02 (1.29 - 3.14)
MELD-Na at infection	1.02 (0.99 - 1.04)
Interaction terms	
CA infection * prior isolation of MDRO	4.19 (1.31 - 13.40)
ICU admission * pneumonia	1.80 (1.02 - 3.17)
ICU admission * UTI	0.35 (0.15 - 1.01)
CA infection * penumonia	0.39 (0.15 - 1.01)

OR: odds ratio. CI: confidence interval. MDRO: multidrug-resistant organism. SBP: spontaneous bacterial peritonitis. UTI: urinary tract infection. HCA: health-care associated-infection ACLF: acute-on-chronic liver failure. UCI: intensive care unit. CA: community-aquired, MDRO: multi-drug resistant organism.

https://doi.org/10.1016/j.aohep.2023.101277